



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>



RECEIVED IN EXCHANGE
FROM
New York State Library



DOCUMENTS
OF THE
ASSEMBLY

OF THE
STATE OF NEW YORK

ONE HUNDRED AND FORTY-FIRST SESSION

1918

VOL. XII.—No. 26—PART 3

ALBANY
J. B. LYON COMPANY, PRINTERS
1918

STATE OF NEW YORK

DEPARTMENT OF AGRICULTURE

TWENTY-FIFTH ANNUAL REPORT

OF THE

Department of Agriculture

For the Year Ending September 30, 1917

PART III

TRANSMITTED TO THE LEGISLATURE JANUARY 15, 1918

ALBANY
J. B. LYON COMPANY, PRINTERS
1918

18032
18032
18032

STATE OF NEW YORK

No. 26

IN ASSEMBLY

JANUARY 15, 1918

TWENTY-FIFTH ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE

PART III

To the Honorable the Legislature of the State of New York:

In accordance with the provisions of the statutes relating thereto, I have the honor to transmit herewith the Twenty-fifth Annual Report of the Department of Agriculture of the State of New York, for the year ending September 30, 1917.

CHARLES S. WILSON

Commissioner of Agriculture

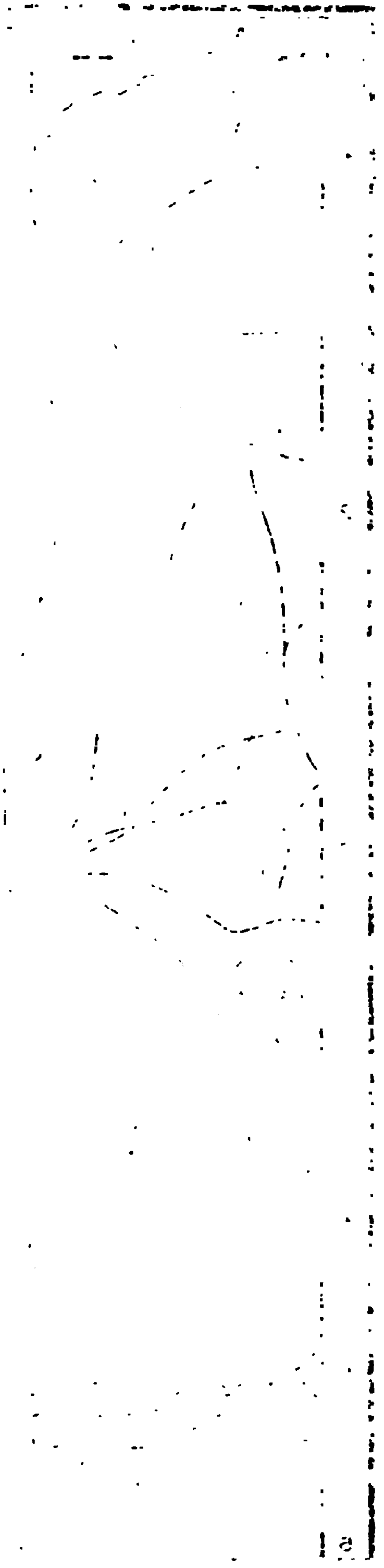
January 15, 1918.

CONTENTS

	PAGE
Bulletin 90. Farms for Sale or Rent in New York, 1917.....	9
Bulletin 91. Owners of Pure-Bred Live Stock in New York.....	311
Bulletin 92. Proceedings of the Eighty-fifth Annual Meeting of the New York State Agricultural Society, 1917.....	407
Bulletin 93. Proceedings of the Annual Meeting of the New York State Dairymen's Association, 1916.....	703
Bulletin 94. Proceedings of the New York State Breeders Association, 1917	803
Bulletin 96. The Sheep Industry in New York State.....	875







STATE OF NEW YORK
DEPARTMENT OF AGRICULTURE
CHARLES S. WILSON, Commissioner

Bulletin 90

Farms for Sale or Rent
in New York
1917

(Occupied and Unoccupied)

Compiled by
CHARLES W. LARMON
Chief, Bureau of Farm Lands and Labor

CONTENTS

	PAGE
Preface	15
Farms that may be rented	39
FARMS FOR SALE:	
Albany County	41
Allegany County	53
Broome County	59
Cattaraugus County	63
Cayuga County	66
Chautauqua County	71
Chemung County	78
Chenango County	82
Clinton County	93
Columbia County	93
Cortland County	114
Delaware County	117
Dutchess County	125
Erie County	133
Essex County	137
Franklin County	138
Fulton County	141
Genesee County	143
Greene County	147
Hamilton County	155
Herkimer County	156
Jefferson County	160
Lewis County	164
Madison County	171
Monroe County	176
Montgomery County	179
Niagara County	181
Oneida County	182
Onondaga County	191
Ontario County	196
Orange County	199
Oswego County	202
Otsego County	210
Putnam County	226
Rensselaer County	227
Rockland County	235
St. Lawrence County	236

	PAGE
Saratoga County	239
Schoharie County	251
Schuyler County	260
Seneca County	264
Steuben County	268
Suffolk County	272
Sullivan County	273
Tioga County	275
Tompkins County	285
Ulster County	289
Warren County	293
Washington County	297
Wayne County	299
Westchester County	303
Wyoming County	304
Yates County	306

LIST OF ILLUSTRATIONS

	PAGE
Fig. 1. House on Farm No. 12, Town of Guilderland, Albany County..	47
2. View on Farm No. 35, Town of Westerlo, Albany County.....	47
3. View on Farm No. 37, Town of Alfred, Allegany County....	55
4. House and Barn on Farm No. 66, Town of Salamanca, Catta- raugus County	67
5. Buildings on Farm No. 96, Town of Westfield, Chautauqua County	79
6. House on Farm No. 87, Town of French Creek, Chautauqua County	83
7. House on Farm No. 99, Town of Baldwin, Chemung County.	83
8. View on Farm No. 115, Town of Norwich, Chenango County.	87
9. House on Farm No. 109, Town of Coventry, Chenango County.	87
10. View on Farm No. 122, Town of Ancram, Columbia County..	91
11. Buildings on Farm No. 123, Town of Austerlitz, Columbia County	91
12. View on Farm No. 124, Town of Austerlitz, Columbia County.	95
13. House on Farm No. 124, Town of Austerlitz, Columbia County.	95
14. View on Farm No. 128, Town of Canaan, Columbia County..	99
15. Mill and Dam on Farm No. 135, Town of Chatham, Columbia County	99
16. View on Farm No. 132, Town of Chatham, Columbia County..	103
17. House on Farm No. 138, Town of Clermont, Columbia County.	107
18. House on Farm No. 139, Town of Copake, Columbia County..	107
19. House on Farm No. 144, Town of Ghent, Columbia County....	111
20. Buildings on Farm No. 144, Town of Ghent, Columbia County.	115
21. House on Farm No. 146, Town of Ghent, Columbia County...	115
22. House on Farm No. 140, Town of Gallatin, Columbia County..	119
23. House on Farm No. 149, Town of Kinderhook, Columbia County	119
24. House on Farm No. 164, Town of Cincinnatus, Cortland County.	123
25. Barn on Farm No. 164, Town of Cincinnatus, Cortland County.	127
26. Barn on Farm No. 165, Town of Cincinnatus, Cortland County.	127
27. Views on Farm No. 170, Town of Andes, Delaware County...	131
28. View of Farm No. 180, Town of Walton, Delaware County....	135
29. Buildings on Farm No. 184, Town of Hyde Park, Dutchess County	139
30. House on Farm No. 201, Town of Marilla, Erie County.....	145
31. House on Farm No. 229, Town of Durham, Greene County....	145
32. House on Farm No. 232, Town of Greenville, Greene County..	153
33. View on Farm No. 232, Town of Greenville, Greene County...	153
34. House on Farm No. 238, Town of Inlet, Hamilton County.....	157
35. House on Farm No. 246, Town of Russia, Herkimer County...	157
36. Buildings on Farm No. 242, Town of Little Falls, Herkimer County	161
37. View of Farm No. 260, Town of Osceola, Lewis County.....	169
38. Cattle and Barns on Farm No. 260, Town of Osecola, Lewis County	169

	PAGE
FIG. 39. House on Farm No. 281, Town of Lebanon, Madison County...	177
40. Buildings on Farm No. 282, Town of Lebanon, Madison County.	177
41. Buildings on Farm No. 306, Town of Paris, Oneida County..	183
42. House on Farm No. 305, Town of Marshall, Oneida County..	193
43. View of Farm No. 309, Town of Verona, Oneida County.....	193
44. View on Farm No. 314, Town of Clay, Onondaga County.....	197
45. House on Farm No. 318, Town of Pompey, Onondaga County.	197
46. General View on Farm No. 345, Town of Palermo, Oswego County	207
47. Main House on Farm No. 345, Town of Palermo, Oswego County	207
48. One of the Large Barns on Farm No. 345, Town of Palermo, Oswego County	211
49. Sawmill and Cooperage Plant on Farm No. 345, Town of Palermo, Oswego County.....	211
50. Buildings on Farm No. 388, Town of Westford, Oswego County.	223
51. House on Farm No. 368, Town of Edmeston, Otsego County...	229
52. View on Farm No. 408, Town of Grafton, Rensselaer County.	229
53. View on Farm No. 412, Town of Schodack, Rensselaer County.	233
54. House on Farm No. 418, Town of Corinth, Saratoga County.	237
55. House on Farm No. 424, Town of Galway, Saratoga County..	241
56. House on Farm No. 425, Town of Greenfield, Saratoga County.	245
57. House on Farm No. 433, Town of Moreau, Saratoga County.	245
58. Buildings on Farm No. 435, Town of Saratoga, Saratoga County.	249
59. Views of Farm No. 441, Town of Saratoga, Saratoga County.	253
60. House on Farm No. 450, Town of Jefferson, Schoharie County.	257
61. House on Farm No. 448, Town of Gilboa, Schoharie County...	257
62. Houses on Farm No. 464, Town of Hector, Schuyler County....	265
63. Main House and Barn on Farm No. 471, Town of Fayette, Seneca County	269
64. View of Farm No. 492, Town of Rockland, Sullivan County.	277
65. House on Farm No. 494, Town of Barton, Tioga County.....	277
66. Buildings on Farm No. 511, Town of Spencer, Tioga County.	283
67. Buildings on Farm No. 526, Town of New Paltz, Ulster County.	283
68. Buildings on Farm No. 522, Town of Gardiner, Ulster County.	291
69. Buildings on Farm No. 529, Town of Ulster, Ulster County..	295
70. Dairy Barn on Farm No. 529, Town of Ulster, Ulster County..	295
71. Buildings on Farm No. 554, Town of Genesee Falls, Wyoming County.	307

PREFACE

This bulletin is issued by the New York State Department of Agriculture for the purpose of furnishing information to those who wish to purchase farms and engage in agricultural pursuits in this state. Many wish to change their location in order to purchase low-priced productive lands capable of producing a large variety of profitable crops; others, to get nearer to the best markets in the country; others, again, to secure a profit on the advance in the value of their purchases; while still others, who have been unsuccessful or have tired of city life, seek the independent rural life and the sure income from farming operations.

The population of New York State is now estimated by the Census Bureau at 10,250,000. Over 80 per cent of this great number of people resides in fifty-seven cities, 465 incorporated villages, and the large number of unincorporated villages of the state, leaving but 375,000 actually engaged in agricultural pursuits. The consumption of food products in this country is now practically equal to the production and assures the farmer a good price for his products.

The state of New York contains 215,597 farms of an average of 102 acres each — a total of 22,030,367 acres included in farms. Of this area, 14,844,039 acres are classed as improved lands, and 7,186,328 acres are unimproved; 8,250,000 acres are under cultivation; the balance is pasture and woodland. A considerable portion formerly utilized for cultivation or pasturage is now lying practically idle.

New York farms, as a rule, possess a large proportion of fertile, highly productive soils, good homes with beautiful surroundings, outbuildings ample for the farm and usually in good repair, and timber enough for farm use. Pure spring water is brought to the buildings from never-failing springs in the hillsides or is pumped from shallow wells, as good water as found near the surface. Plenty of fruit for home use is usually found and there are good commercial orchards upon many of these farms.

The state has a highway system of improved macadam roads upon which \$150,000,000 has been expended. These roads lead to practically all parts of the state, connecting the farms with good markets, and the farmers often sell their produce direct to consumers in the nearby cities and villages. Freight rates are low, and good transportation

lines, both steam and trolley, extend to all parts of the state. Telephones and rural mail delivery reach all farming sections. Educational facilities and social conditions in the rural sections are excellent. These farms are low priced when their producing capacity, location, and the prices at which they can be purchased are taken into consideration, but are not "cheap" farms in the sense in which that word is usually employed. The demand for farm products of all kinds is now so great that every acre of land in this state capable of producing a profitable crop should be cultivated, and the principal object in collecting and disseminating the information contained in this bulletin is to show the agricultural advantages of the state to those desiring to purchase farms. The state needs more and better farmers to occupy and cultivate these farms and increase production to meet the demands of the people for farm produce.

An inspection of the descriptions of farms for sale in this bulletin will show that the principal reasons for their being offered for sale is to settle the estates of former owners; inability of the owner to longer operate the farm owing to old age; because the owner has saved sufficient funds from the operation of his farm to live in comparative ease for the remainder of his life, or because he is interested in other business and cannot give the farm the attention required to carry it on successfully.

New York stands first as an industrial and manufacturing state and in consequence there has been a constant demand for capable young men and women to fill positions of responsibility and trust. This has led a large proportion of the young people from the farms to the cities and large towns and is, no doubt, another reason why many of the farms are offered for sale. This has undoubtedly taken place in other sections of the country as well as here but probably not to the same extent.

CROPS

The principal crops produced in the state rank in their money value as follows: hay and forage, dairy products, grain, meat products, vegetables, and fruit. Figures taken from reports of the United States Department of Agriculture show that over 7,000,000 tons of hay were produced in the state during the year 1916, valued at about \$92,000,000. Dairy products are equal in value, and the total value of all crops, dairy and meat products is about \$544,000,000. Notwithstanding the comparative small acreage of the state under cultivation, New York stands eighth in crop value in the United States, the present high price of wheat placing several of the western states, which are large producers

of that cereal, ahead of New York. Practically all crops produced successfully in the temperate zone, excepting those requiring conditions such as prevail in the south, can be produced here profitably.

Of the states of the Union, New York stands first in the production of hay and forage, second only to Wisconsin in quantity of dairy products, first in vegetables, first in potatoes on a ten-year average, first in apples, and takes the lead in many other important products. While not considered a corn state, the amount of corn produced per acre is equal to that of the principal grain-raising states and is of much greater value. Oats, rye, barley, and buckwheat always produce good crops.

The United States Department of Agriculture gives the following figures for this state for the year 1916, crops of wheat, corn, oats, and hay:

	Bushels per acre	Price per bushel	Value per acre	Balance in favor of New York State
WHEAT				
New York State	21.	\$1 65	\$34 65	\$11 03
Ten leading grain states	14.45	1 63½	23 62	.....
CORN				
New York State	30.	\$1 09	\$32 70	\$8 79
Ten leading grain states	28.4	83½	23 91	.....
OATS				
New York State	26.	\$0 58	\$15 08	\$0 31
Ten leading grain states	31.1	47½	14 77	.....
HAY				
	Tons per acre	Price per ton	Value per acre	Balance in favor of New York State
New York State	1.62	\$12	\$19 44	\$4 81
Ten leading grain states	1.62½	9	14 63	.....

DAIRY INDUSTRY

The dairy industry of this state is well developed, the last census giving the number of dairy cows as 1,509,000. Later estimates give a considerably larger number. Formerly, large quantities of milk were manufactured into butter and cheese, but the demands for milk in the

cities and towns has increased rapidly until at least three-fourths of the milk produced is now shipped in its raw or pasteurized state. During the fall of 1916, the farmers of the state formed an organization similar to that prevailing in many other sections of the country and secured an increase of about one cent per quart in the wholesale price of milk. Since that time another voluntary increase has been made by the dealers. Rich pasturage is found in practically all sections of the state and red clover and alfalfa are grown in abundance when the soil is properly prepared. All crops necessary for the production of milk can be grown in abundance, and where this is done a good profit is made by the dairymen.

Cheese factories, creameries, and condenseries are located at convenient points throughout the state, and milk shipping stations practically at all railway points. About 30,000,000 forty-quart cans of milk are required annually to supply New York City, and that city, it is estimated, consumes dairy products to the value of \$180,000,000 annually.

New York, excepting a few localities, has paid but little attention to beef, but where the farmers have engaged in this industry they have been uniformly successful. There is no good reason why beef cannot be produced at a good profit in this state and undoubtedly there will be a great increase in the near future in its production. Large numbers of the low-priced farms are suitable for this purpose, furnishing good pasture and plenty of good soil to produce grain and winter feed.

SHEEP

For many years there has been a constant decline in the number of sheep kept in this state, since low prices of wool and mutton for a time made the industry unprofitable, but at present there is a general awakening on the part of many farmers who have lands adapted to the industry, to engage in the production of sheep and wool.

Several million acres of low-priced land, ranging for \$10.00 to \$30.00 per acre and located at fairly high altitudes, offer great opportunities to the sheep raiser. Tracts of land embracing a large acreage can be secured by combining several farms for the purpose, where one wishes to carry on the business on a large scale. Wool at present pays all expenses of maintaining the flock, leaving the lambs as clear profit. Many inquiries are being received from all parts of the country from people who wish to engage in this industry, and many farms and tracts of land have recently been purchased for the purpose.

The legislature of 1917 will undoubtedly enact a stringent law for

SOUTHERN NEW YORK ALONG THE SUSQUEHANNA

the better protection of sheep from dogs so that one can safely engage in the business. The law proposed provides for the registration of all dogs in the town clerks offices, and that they must wear a metal tag at all times when off their owners premises, by which tag they can be identified. They must be confined securely during the period between sunset and sunrise, and if seen off their owner's premises during that period, may be killed by any one. It will be the duty of all officers of the law to destroy such dogs. The same treatment will be accorded if dogs are found worrying live stock or can be identified as having committed depredations.

SWINE

There is in this state a large demand for home-grown pork products, the number of hogs now raised being wholly insufficient. The prevailing prices make this a very profitable branch of agriculture. Hogs grow rapidly on pasture and but little grain is needed to finish them for market. If bacon and hams are cured on the farm a much greater profit is realized, and a ready market may be found in the nearby towns and cities. This industry can be extended to an almost unlimited extent.

ALFALFA

In many sections of the state alfalfa is extensively grown and in practically all sections good crops are produced if the soil is properly prepared. An application of lime and bacteria is needed in some sections and the expense necessary is but a few dollars per acre. The increase in alfalfa growing in many sections has been rapid, showing gains from year to year of from 50 to 75 per cent in acreage.

POULTRY AND EGGS

There is a constantly growing demand for poultry and eggs, and prices have from year to year shown a material increase, notwithstanding a large increase in production.

FRUIT

New York has for a century or more been noted for the excellent quality of fruit produced, and in many sections particularly adapted to them, the increase in production of apples has been rapid, until such sections are now known as the "fruit belts" of the state. The principal section extends from the south-western part of the state along Lake Erie where grapes are very profitably grown, to the section along Lake Ontario extending well down to the central portion of the state, which is particularly adapted to apples, pears, and cherries, and in the lake

section, peaches. In some of the counties of that section more apples are produced annually than in some of the noted apple-growing states of the northwest. Another section suitable for the purpose is the Hudson River Valley for a distance of nearly 200 miles. The state produced in 1914, 49,600,000 bushels of apples; the crop for 1916 was estimated at 36,000,000 bushels.

The Grand Prize for the largest and best display of fruit at the Panama Pacific Exposition, and about one hundred first and second prizes on individual exhibits of grain, vegetables, and other products of the state were awarded New York State.

No irrigation is required in this state, and fruit trees are long-lived; trees of apples from which Indians picked fruit over one hundred and fifty years ago are still bearing.

Fruits are marketed at very small expense in this state, the saving made over that of many sections of the country being sufficient to create a good profit to the grower. The cities and towns of the state offer an excellent market at all times, and prices are nearly uniform from year to year.

VEGETABLES

The vegetable industry is well developed in this state, cabbage, celery, and onions being produced in large quantities. In many sections there are muck lands cleared, or capable of being improved, that are especially adapted to the raising of these profitable crops. New York has ranked first in potatoes for many years, having in some years produced upwards of 50,000,000 bushels. This crop is particularly profitable at the prices that have prevailed for the last few years. Potatoes can be profitably raised in nearly all parts of the state.

MARKETS

The city of New York now has a population of practically half of that of the state, or about 5,250,000, and the other 56 cities of the state have a population of nearly 2,000,000. New England is always in the market for New York State products, and, being chiefly a manufacturing section, produces but a small proportion of the farm products consumed. The large cities to the south, Philadelphia, Baltimore, Washington and others, also furnish good markets for New York State products. The rates of transportation from the farms of New York to those points are comparatively low as compared to those prevailing in the sections where a large proportion of the food supply of this country is produced. The following table of rates shows the advantage that the New York State farmer possesses in this respect.

LOOKING ACROSS THE CHEMUNG RIVER VALLEY AT ELMIRA.

RAILROAD RATES TO NEW YORK CITY FROM FOLLOWING POINTS PER 100 POUNDS, CAR
LOTS

	Syracuse and Geneva, N. Y.	Indian- apolis, Ind.	Chicago, Ill.	Des Moines, Iowa	Kansas City, Mo.
Apples.....	\$.15	\$.30	\$.30	\$.505	\$.57
Butter.....	.30	.605	.65	.97	1.10
Cattle.....	.15	.26	.28	.4775	.50
Dressed meats.....	.25	.40	.45	.615	.635
Eggs.....	.30	.605	.65	.97	1.10
Grain and grain products.....	.10	.185	.167	.30	.3325
Hay.....	.15	.26	.30	.45	.52
Hogs.....	.175	.28	.30	.535	.535
Sheep.....	.175	.30	.30	.525	.525
Potatoes and vegetables.....	.15	.28	.30	.485	.50
Poultry.....	.35	.695	.75	1.145	1.20

The following list gives the wholesale prices at which the following products were selling in the cities named, on January 1, 1917. Much better prices are usually obtained by those who sell their produce directly to consumers.

WHOLESALE MARKET REPORT
JANUARY 12, 1916

	New York	Albany	Syracuse	Buffalo
Apples, bbl.....	\$3-4 50	\$2 50-4	\$2 50-3 00	\$2-4 00
Beans, 100 lbs.....	\$10-12	\$10-12	\$10-12	\$10-13
Butter, lb.....	41¢	41¢	40¢	38-40¢
Calves, live, lb.....	11-16¢	10-14¢	10-14¢	13-15¢
Calves, dressed, lb.....	17-21¢	16-20¢	16-20¢	16-20¢
Cattle, beef (butcher stock).....	\$8-10 50	\$7 50-10	\$8-10	\$7-9 50
Cheese, lb.....	24½¢	24¢	24¢	24¢
Chickens, live, lb.....	20-24¢	18-20¢	17-20¢	17-20¢
Corn, bu.....	\$1 12	\$1 08	\$1 06	\$1 05
Ducks, live, lb.....	20¢	16-18¢	15-18¢	14-16¢
Eggs, fresh, doz.....	55 to 60¢	45-55¢	45-55¢	40-55¢
Fowls, live, lb.....	18-22¢	16-20¢	17-20¢	17-21¢
Hay, alfalfa, ton.....	\$20	\$18	\$14	\$15
Hay, clover, ton.....	\$18	\$17	\$13	\$14
Hay, timothy, ton.....	\$21	\$18	\$16	\$16
Hogs, live, lb.....	10½-11¢	10¢	10¢	\$9-10¢
Lamb, live, lb.....	14½¢	11¢	10½¢	12-14¢
Oats, bu.....	65¢	62¢	60¢	60¢
Onions, 100 lbs.....	\$4-4 75	\$4-4 50	\$4-4 50	\$3 75-4 50
Potatoes, bbl.....	\$5-5 75	\$4 50-5	\$4-4 50	\$4-5
Rye, bu.....	\$1 50	\$1 35	\$1 35	\$1 35
Straw, oat, ton.....	\$14	\$10	\$10	\$10
Straw, rye, ton.....	\$16	\$14	\$12	\$13
Turkeys, live, lb.....	25¢-30¢	25-27¢	22-25¢	22-26¢
Wheat, bu.....	\$1 90-2 15	\$1 80-2 00	\$1 80-2 00	\$1 80-2 00

LAND PRICES IN NEW YORK

As compared to other sections of the United States, prevailing prices for farm lands in New York are extremely low and are, as a rule, one-third to one-half of those in many states lacking in every way the advantages possessed by the New York State farmer. As will be noted in the descriptions on the following pages, good farms well located and with fine improvements, range from \$30 to \$60 per acre, and these farms possess all of the features necessary for comfortable homes and the profitable cultivation of the soil.

The following figures taken from the federal government reports show the production and value per acre of the leading crops grown in this state in 1916 as compared to those of the ten principal grain-growing states of the country:

1916	CORN		HAY		OATS		POTATOES		Total value per acre
	Bushels per acre	Value per acre	Tons per acre	Value per acre	Bushel per acre	Value per acre	Bushels per acre	Value per acre	
New York....	30	\$32 70	1.62	\$19 44	26	\$15 08	70	\$105 00	\$172 22
Illinois.....	30	25 20	1.45	15 95	38½	18 48	58	91 06	150 69
Nebraska.....	26	20 54	2.20	13 20	35½	14 91	73	89 79	138 44
Kansas.....	10	8 90	1.55	10 70	23½	12 46	71	104 37	136 43
Wisconsin....	36	32 40	1.70	18 70	37	17 39	47	64 86	133 35
Missouri.....	19½	17 16	1.30	12 09	25	12 25	60	90 60	132 10
Ohio.....	31½	26 15	1.57	16 01	28	14 00	45	75 15	131 31
Minnesota....	33½	25 46	1.85	13 51	26½	11 83	60	75 60	126 40
Indiana.....	33½	25 46	1.44	14 40	30	14 10	44	69 96	123 92
Michigan.....	27½	25 30	1.59	15 26	30	14 70	48	68 64	123 90
Iowa.....	36½	28 47	1.61	14 01	37	16 65	44	64 24	123 37

The foregoing table shows conclusively the great fertility of the soil of this state, and the same comparison holds good on other crops and the products of the dairy, live stock, orchard, and poultry.

New York State farms have been under cultivation for from one to two centuries and are producing on the average more per acre to-day than ever before in the history of the state. Better and more scientific methods have been adopted and the farms of the state are rapidly increasing in fertility.

The following abstract shows the opinion of Secretary of Agriculture, James Wilson, after an investigation of agricultural conditions in this state:

LEBANON VALLEY — SHAKERS SETTLEMENT IN DISTANCE.

“The cheapest farm lands in the United States to-day, with nearness to good markets, price of land and all other farm conditions considered, are east of the Alleghenies, and the low-priced farm lands of New York State are the best investments in America. You have good schools, churches, substantial towns, and intelligent people, and some of the best and largest markets in the world at your door. Your soils are not exhausted — they are strong, and with few exceptions are as productive as they ever were. It is far beyond my understanding why the people have gone away and left these farms — these rich valleys and well timbered hills, with numberless streams of splendid water on every hand, ideal for grazing and stock raising, for the production of fruit and dairy products.”

Crop failure is practically unknown in this state. An average rainfall of 36 inches insures sufficient moisture and the growing season is sufficiently long to mature all crops that can be profitably grown. The largest amount of rainfall occurs generally during the growing season, May and June, and the least in September and October, during harvest time.

Since the outbreak of hostilities in Europe unusual demands have been made on this country for food products. The flocks and herds of Europe are being rapidly consumed, and for many years after the close of the war, Europe will require large quantities of such products from the United States. The growth of population in this country is exceeding the growth in production, thus apparently insuring good and satisfactory prices for farm produce for a long period. The United States will be the principal source of supply for replenishing Europe with live stock.

In New York State interest in agriculture is rapidly increasing and values of farm lands are much firmer than for many years. A large number of farms have been purchased by people from other states during the past year and a greater inquiry is noted from all sections of the country for information concerning New York farms. This department looks for a very rapid increase in such prices for the next few years, or until values of New York State farms bear a closer relation to those of many other portions of the country. The Department of Agriculture and all the agricultural institutions in the state are assisting and encouraging better agricultural methods and will devote greater attention hereafter to the live-stock industry of the state. Farm bureau organizations have been established in thirty-five of the counties of the state and have proved to be one of the most potent factors in the

improvement of agricultural conditions. Cooperative societies have been organized in many sections and have made a considerable saving both in buying and in selling.

There are now in the state about 1,000 local grange organizations with a membership of about 110,000. The state has one of the best school systems in the country and maintains, in addition, a State College of Agriculture and a number of secondary agricultural schools in which courses of study requiring from a few months to four years are given.

The highway system of the state is maintained in excellent condition. The Barge Canal, extending from Buffalo to tidewater at Albany, and from Albany north to Lake Champlain and through that body to Canada, with branches from Syracuse to Oswego and connecting the lakes in the interior of the state with the main line, is practically completed. This work has cost the state \$130,000,000.

Water transportation is much cheaper than rail and assists in maintaining freight rates at reasonable figures. Taxes are comparatively low, averaging about one per cent on the actual value of the land. Personal property on farms is seldom, if ever, taxed. The revenue required for state purposes is derived indirectly from taxes on excise, inheritance, corporations and other sources, which usually produce a sufficient sum. The cities and towns of the state represent more than 80 per cent of the assessed valuation, leaving less than 20 per cent upon the farms.

The State Department of Agriculture invites your correspondence and will be glad to send bulletins and other information to all parties interested in learning something of the agricultural and horticultural activities of this state. The department will assist purchasers in selecting locations suitable for the line of agriculture in which they may wish to engage, secure for them specific information whenever possible, and will gladly extend to them the courtesies of the department.

CHARLES S. WILSON,
Commissioner of Agriculture.

Compiled by:

CHARLES W. LARMON,
Chief, Bureau of Statistics.

THE FOLLOWING IS AN ESTIMATE OF THE FARM VALUE OF THE AGRICULTURAL, HORTICULTURAL, AND ANIMAL PRODUCTS OF NEW YORK STATE FOR 1916.

	Per acre	Price per bushel or ton	Total for state	Farm value
Corn, bu.....	30.	\$1 09	14,340,000	\$15,630,600
Ensilage, tons.....	26.	4 00	3,000,000	12,000,000
Oats, bu.....	26.	58	31,356,000	18,186,480
Wheat, bu.....	21.	1 65	7,875,000	12,993,750
Barley, bu.....	23.3	97	1,887,000	1,830,390
Rye, bu.....	18.	1 24	2,664,000	3,303,360
Buckwheat, bu.....	12.	1 07	4,402,000	4,710,140
Potatoes, bu.....	70.	1 50	21,350,000	32,025,000
Beans, bu.....	.....	6 00	1,200,000	7,200,000
Hay, tons.....	1.62	12 00	7,727,000	92,724,000
Straw, tons.....	.....	8 00	2,500,000	15,000,000
Apples, bu.....	.....	60	37,800,000	22,680,000
Pears, bu.....	.....	93	1,675,000	1,557,750
Peaches, bu.....	.....	1 75	1,215,000	2,126,250
Dairy products.....	.....	.....	.....	110,000,000
Poultry and eggs.....	.....	.....	.....	35,000,000
Meat products and live stock.....	.....	.....	.....	65,000,000
Wool and mohair.....	.....	.....	.....	1,500,000
Nursery products.....	.....	.....	.....	4,000,000
Vegetables and cannery products.....	.....	.....	.....	45,000,000
Grapes.....	.....	.....	.....	6,000,000
Small fruits and berries.....	.....	.....	.....	6,000,000
Forest products.....	.....	.....	.....	10,000,000
Miscellaneous — including, hops, tobacco, maple sugar, honey, seeds, nuts and all other crops.....	.....	.....	.....	20,000,000
Total.....	.....	.....	.....	\$544,467,720

POPULATION OF COUNTIES OF NEW YORK STATE, 1916 CENSUS

<i>County</i>	<i>Total Inhabitants</i>
Albany	183,330
Allegany	40,216
Bronx	615,600
Broome	90,641
Cattaraugus	72,756
Cayuga	65,751
Chautauqua	116,818
Chemung	59,017
Chenango	36,648
Clinton	47,561
Columbia	44,111
Cortland	30,074
Delaware	45,955
Dutchess	91,044
Erie	571,897
Essex	32,461
Franklin	46,181
Fulton	45,625
Genesee	40,707
Greene	30,091
Hamilton	4,491
Herkimer	64,109
Jefferson	81,009
Kings	1,798,513
Lewis	25,947
Livingston	38,427
Madison	41,742
Monroe	319,310
Montgomery	61,030
Nassau	116,825
New York	2,137,747
Niagara	108,550
Oneida	167,331
Onondaga	213,992
Ontario	54,628
Orange	118,118
Orleans	33,919
Oswego	75,929
Otsego	48,534

A NEW YORK CERTIFIED MILK FARM.



POPULATION OF COUNTIES OF NEW YORK STATE, 1916 CENSUS — *Ctd.*

<i>County</i>	<i>Total Inhabitants</i>
Putnam	12,767
Queens	396,727
Rensselaer	121,330
Richmond	98,634
Rockland	46,903
St. Lawrence	90,291
Saratoga	62,982
Schenectady	98,625
Schoharie	23,005
Schuyler	13,954
Seneca	25,249
Steuben	83,630
Suffolk	104,342
Sullivan	38,189
Tioga	25,549
Tompkins	36,535
Ulster	85,367
Warren	32,977
Washington	46,955
Wayne	53,476
Westchester	321,713
Wyoming	33,028
Yates	18,841
Total	<u>9,687,744</u>

POPULATION OF CITIES OF NEW YORK STATE, 1915 CENSUS

<i>City</i>	<i>Inhabitants</i>
Albany	107,979
Amsterdam	34,319
Auburn	32,468
Batavia	13,278
Beacon	10,165
Binghamton	53,688
Buffalo	454,630
Canandaigua	7,501
Cohoes	23,433
Corning	13,459
Cortland	12,367
Dunkirk	17,870
Elmira	40,093
Fulton	11,138
Geneva	13,232
Glens Falls	16,323
Gloversville	21,178
Hornell	14,352
Hudson	11,544
Ithaca	16,750
Jamestown	37,780
Johnstown	10,687
Kingston	26,354
Lackawanna	15,737
Little Falls	13,022
Lockport	18,693
Middletown	16,381
Mount Vernon	37,583
Newburg	27,876
New Rochelle	31,758
New York	5,047,221
Niagara Falls	42,257
North Tonawanda	13,498
Norwich	8,342
Ogdensburg	14,338
Olean	17,925
Oneida	9,461
Oneonta	10,474
Oswego	25,426

POPULATION OF CITIES OF NEW YORK STATE, 1915 CENSUS — *Ctd.*

<i>City</i>	<i>Inhabitants</i>
Plattsburg	10,134
Port Jervis	9,413
Poughkeepsie	32,714
Rensselaer	11,210
Rochester	248,465
Rome	21,926
Saratoga Springs	13,792
Salamanca	8,370
Schenectady	80,381
Syracuse	145,293
Tonawanda	9,147
Troy	75,488
Utica	80,589
Watertown	26,895
Watervliet	14,990
White Plains	19,287
Yonkers	90,948
 Total	 7,249,622

FARMS THAT ARE FOR RENT, INDICATED BY NUMBER

1, 9, 17, 29, 31, 32, 38, 41, 43, 46, 52, 53, 58, 60, 62, 64, 65, 70, 88, 89, 90, 92, 108, 125, 134, 135, 139, 141, 150, 162, 164, 167, 170, 174, 175, 179, 184, 192, 194, 209, 211, 232, 239, 240, 241, 247, 248, 250, 251, 273, 283, 286, 288, 301, 305, 324, 344, 378, 401, 418, 429, 433, 445, 447, 449, 450, 455, 459, 466, 472, 489, 493, 510, 511, 514, 521, 522, 524, 525, 530, 531, 534,, 535.

NEW YORK FARMS

ALBANY COUNTY

Area, 527 square miles. Population, 183,330. Number of farms, 3,146. Average value of farm lands per acre, \$49.61. Annual total precipitation, 38.77 inches. Annual mean temperature, 50.3°. County seat, Albany.

Located in the eastern part of the state on the western bank of the Hudson river.

Surface features are undulating and hilly, with a general drainage to the east. The soil upon the intervalles is a deep, rich alluvial loam. A considerable extent of the northeastern portion of the county is sand with strips of clay along the streams. Between this sand region and the foothills of the Helderbergs is a belt of clay and gravelly loam, very productive. Rye, barley, hay, potatoes, vegetables, dairy products and poultry are the chief products. The county is traversed by excellent lines of communication, by steam, water and trolley.

The educational and religious advantages are, like all the counties of the state, unsurpassed. Besides the excellent city schools, there are 146 district schools, and a State College for Teachers located at Albany. There are about 1,000 miles of state and county improved roads.

The value of all the farm property is \$17,742,896, an increase of 11.8 per cent. since 1900. Two thousand nine hundred and forty-six farms report domestic animals consisting of dairy cows, 13,483; horses, 8,780; swine, 13,607; sheep, 17,070; poultry, 171,339. There are fourteen agricultural organizations for the purpose of promoting farming interests and social life on the farm.

TOWN OF BERNE

Population 1,638

No. 1.—Farm of 143 acres; located 3 miles from East Berne P. O.; 11 miles from railway station at Voorheesville, on line of D. & H. R. R.; 1 mile from school; 3 miles from churches; 2½ miles from butter factory. Highways, good condition. Nearest city, Albany, population 107,979, 22 miles distant, reached by state road. General surface of farm, level. Altitude, 1,200 feet. Nature of soil, loam. Acres in meadow, 10; in timber, 20, maple, ash, beech, basswood and hemlock; acres tillable, 120. Fruit, apples and pears. Adapted to hay, oats, barley, buckwheat, rye, corn and potatoes. Fences, rail and wire. House, 6 rooms, and small store room. Out-buildings, horse and cow stable, granary, poultry house, 12x16, all in good condition. Watered, house by well; barns, by well; fields, by springs. Occupied by tenant. Reason for selling, old age. Price, \$15.00 per acre. Terms, ⅓ cash, balance on time to suit purchaser. Address John W. Hays, owner, Brookview, N. Y. Will rent.

No. 2.—Farm of 184 acres; located ½ mile from West Berne P. O.; 9 miles from station at Schoharie, on line of D. & H. R. R.; ¼ mile from school; ½ mile from churches; 2½ miles from butter factory and milk station. Highways, good. Nearest village, West Berne, population, 269, ½ mile distant. General surface, level and rolling. Acres that can be used as meadow, all; in timber, 60, pine, hemlock, ash and hickory. Acres tillable, 125. Fruit, 3 orchards, consisting of apples, cherries, currants and peach trees. Adapted to hay, corn, rye, buckwheat and barley. Fences, woven and barbed wire. Large house for 2 families. Barns, 40 x 65 and 40x50; 3 sheds, 24x60, and hog house, in good condition. Good wells for house and barns. Fields watered by stream. Reason for selling, ill health. Address Fletcher Post, owner, West Berne, N. Y.

TOWN OF BETHLEHEM

Population 5,500

No. 3.—Farm of 133 acres; located 3 miles from Selkirk P. O., R. D. 1; ¾ mile from railway station at Wemple on

line of West Shore Ry.; 1 mile from school; 1 mile from church. Highway in good condition. Nearest city, Albany, population, 107,979; distant 6 miles, reached by rail and highway. General surface of farm, chiefly level. Nature of soil, good. Acres in timber, 6; tillable, 127. Orchard consists of apples, pears and cherries. Adapted to hay, grain, potatoes and gardening. Fences, wire, in good condition. House; 8 rooms, wood house attached, in good condition. Outbuildings, barn, wagon house, cow shed with loft, hog pen, poultry house, corn crib, all in good condition. Watered; house, by good well and cistern; barns, by large cistern and spring. Hudson river, 1 mile distant. Occupied by tenant. Price, \$7,500. Terms, \$3,000 cash, remainder on mortgage. Address Mrs. John F. Shafer, owner, Selkirk, N. Y.

TOWN OF COEYMAN'S

Population 4,581

No. 4.—Farm of 280 acres; located $\frac{1}{2}$ mile from Ravena P. O.; 1 mile from railway station, on line of W. S. R. R.; $1\frac{1}{2}$ miles from school; 1 mile from churches; 6 miles from butter factory. Highways, hilly but good. Nearest city, Albany, population, 107,979, 13 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, limestone. Acres that can be used as meadow, 80; in natural pasture, 100; in timber, about 100, pine, hickory and oak, medium quality. Acres tillable, 80. Fruit, apple trees. Best adapted to grain and hay. Fences, stone, fair condition. House, 6 rooms, fair condition; 1 small barn. House watered by well and cistern. Reason for selling, to close an estate. Price, \$3,500. Terms, cash. Address, Howard N. Fuller, owner, 144 State street, Albany, N. Y.

TOWN OF COLONIE

Population 9,989

No. 5.—Farm of 204 acres; located 3 miles from Troy and Watervliet, on line of D. & H. R. R.; $\frac{1}{2}$ mile from school and 2 miles from church. Highways, good. Nearest city, Troy, population, 75,488, 3 miles distant, reached by trolley. General surface, rolling and level. Acres that can be used as meadow, 204; in natural pasture, 20; in timber, 7, chestnut, pine and maple. Acres tillable, 204. Fruit, 300 apple, 390 plum, pear trees, also a large number of cherry trees. Land adapted to any kind of

crops. Fences, all in first class condition. 3 houses, 1 of 14 rooms; 1 tenant house; 1 of 15 rooms with 10 clothes presses, hardwood floors, hot water heat and in excellent condition. Barn, 85x40, 3 smaller barns. House and barns watered by well; windmill supplies both farms. Within short distance of Helderberg mountains, Mohawk and Hudson rivers. Occupied by 2 tenants. Reason for selling, old age. Price, \$20,000. Terms, easy. Address Henry Miller, owner, 43 So. Lake avenue, Albany, N. Y.

No. 6.—Farm of 22 acres; located at Lathams, on line of D. & H. R. R.; about $\frac{1}{8}$ mile from school and church. Highways, state road. Nearest city, Watervliet, population, 14,990, reached by rail. General surface of farm, level. Nature of soil, dark loam. Acres in meadow, all. Acres tillable, all. Fruit, variety, berries and two beds of asparagus. Best adapted to hay and grain. Fences, wire. House, 2 stories and basement; 10 rooms, steam heat, electric lights and bath. Outbuildings, barn 40x60; large shed, wagon house, poultry house, corn crib and 2 greenhouses. Watered, house, by tank in barn. Occupied by owner. Reason for selling, other business. Price, \$10,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address S. Dedrick, owner, Watervliet, N. Y., R. D.

TOWN OF GUILDERLAND

Population 3,690

No. 7.—Farm of 115 acres; located $\frac{1}{2}$ mile from Altamont P. O., R. D. No. 3, and railway station, on line of D. & H. R. R.; $\frac{1}{2}$ mile from school; $\frac{1}{2}$ mile from churches. Highways, macadamized road, good condition. General surface, mostly level, some slightly rolling. Nature of soil, black and gravelly loam. Acres that can be used as meadow, 95; in natural pasture, 5; in timber, 15; pine, hemlock, oak, maple and beech. Acres tillable, 100. Fruit, 100 apple, 40 prune, 50 pear, plum, peach, apricot and cherry trees; 500 plants of red raspberries and black raspberries, currants and gooseberries for home use. Best adapted to fruit, grain and hay. Fences, mostly wire. House, 15 rooms, also tenant house of 9 rooms, good condition. Outbuildings, large barn, ice house, poultry house, hog house, corn house, milk house, good condition; new roofs on barn, shed and wagon house.

THERE ARE MILLIONS OF ACRES IN NEW YORK STATE ADAPTED TO LIVE STOCK AND GENERAL FARMING
AT \$25 TO \$60 PER ACRE.



House watered by spring, also water in kitchen, barns by spring, fields by spring in pasture. Occupied by owner. Reason for selling, old age. Price, \$8,000. Terms, cash. Will sell stock and tools, if desired. Milk collected at door. Address, Henry Ellis, owner, Altamont, N. Y., R. D. No. 3.

No. 8.—Farm of 81 acres; located $\frac{1}{2}$ mile from Guilderland Center P. O.; $\frac{3}{4}$ mile from railway station at Guilderland Center, on line of West Shore Ry.; $\frac{1}{4}$ mile from school and churches; $\frac{1}{4}$ mile from milk station. Highways, macadamized, good. Nearest cities, Albany, 11 miles distant, population, 107,979, and Schenectady, 8 miles distant, population, 80,381, reached by rail and highway. Surface of farm, level. Soil, gravelly, good. Acres that can be used as meadow, 48; acres tillable, 81. Fruit, 900 apple trees. Best adapted to grain, corn and hay. Fences, wire and board, good. House, 30x40, 13 rooms, good. Outbuildings, barn, 38x52; wagon house and horse stable, 24x48; carriage house, 10x24; shed, 20x38; poultry and hog house, 14x32; cow stable, 18x32; ice house and cream room, 14x20, good. Watered, house by well and cistern; barns, by two large cisterns; fields, by well. This farm is 3 miles from Helderberg Mountains, 6 miles from Thompson's and Warner's Lakes, $\frac{1}{2}$ mile from the Normanskill and 11 miles from Hudson River. Occupied by tenant. Reason for selling, owner has other business. Price, \$9,000. Terms, \$3,000 cash. Address Ira Hurst, owner, Guilderland Center, N. Y.

No. 9.—Farm of 64 acres; located $1\frac{1}{2}$ miles from Guilderland Center; $2\frac{1}{2}$ miles from Voorheesville on line of D. & H. R. R.; $\frac{1}{2}$ mile from school; $1\frac{1}{2}$ mile from churches. Milk collected at door. Highways $\frac{1}{2}$ state and $\frac{1}{2}$ dirt road. Nearest city, Albany, population, 107,979, 11 miles distant, reached by highway. General surface, nearly level. Nature of soil, heavy black and some stony. Acres that can be used as meadow, 58; in timber, 6, second growth and some hemlock and pine. Acres tillable, 58. Fruit, 110 apple, 15 pear, 15 plum and 35 cherry trees, also some strawberries. Adapted to rye, oats, corn, buckwheat and beans. Fences, plain and barbed wire, in good condition. House, 8 rooms, in fair condition. Two

barns, 36x24, shed, 12x24, tile silo, 12x36, modern poultry house, 16x60, and brooder house, 13x15. Watered, house, by wells and cistern; barns, by well and fields, by springs. Occupied by owner. Price, \$3,750. Terms, \$1,750 cash and \$2,000 on bond or mortgage. Address, William B. Messer, Voorheesville, N. Y. Will rent.

No. 10.—Farm of 80 acres; located $\frac{1}{2}$ mile from Altamont on line of D. & H. R. R.; $\frac{1}{2}$ mile from school and churches. Highways, state road. Nearest city, Schenectady, population, 80,381, 9 miles distant. General surface, rolling. Nature of soil, gravel and loam. Acres in natural pasture, 4; in timber, 8; oak, hemlock, beech and maple. Acres tillable, 65. Fruit, 200 apple, 50 pear, 40 cherry and 10 plum trees. Adapted to corn, oats, rye, wheat and potatoes. Fences, wire and stone. House, 8 rooms, 36x22; kitchen, 18x20, in good condition. Outbuildings, barn, 40x50, with shed, 20x40, attached and hog house, 18x20. Watered, house by wells; barn, by running spring; and fields, by creek and springs. Occupied by owner. Price, \$5,000. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address, W. E. Armstrong, Altamont, N. Y.

No. 11.—Farm of 51 acres; located $\frac{1}{4}$ mile from railway station at Altamont, on line of D. & H. R. R.; $\frac{1}{4}$ mile from churches. Highways, state road. Nearest city, Albany, population 107,979, 14 miles distant. Reached by railway. General surface, level. Nature of soil, gravel loam. Acres tillable, 50. Fruit, 150 apple, 400 pear trees and 1,000 currant, 1,200 red raspberry and 50 blackberry bushes. Adapted to rye, oats, wheat and hay. Fences, wire. House, large. Outbuildings, barns, 30x40 and 36x40; poultry house, 18x40; hog house, 12x18, and corn crib, 12x12. Watered, house, barn and fields by well. Occupied by owner. Reason for selling, other business. Price, \$8,000. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address, F. Saddlemire, Altamont, N. Y.

No. 12.—Farm of 108 acres; located $\frac{1}{2}$ mile from Meadowdale, on line of D. & H. R. R.; $\frac{1}{2}$ mile from churches; 3 miles from butter factory; 6 miles from cheese factory and $\frac{1}{2}$ mile from condensing plant. Highways, good. Nearest city, Albany, population 107,979, 14 miles distant, reached by rail and highway. Acres

in natural pasture, 15; tillable, all; timber, walnut and pine; fruit, enough for home use. Adapted to hay, oats, corn and potatoes. Fences, stone and wood. House, 11 rooms. Outbuildings, large barn, sheds, carriage house, hog house and corn crib. Occupied by tenant. Reason for selling, other business. Price, \$4,000. Address, P. Crounse, 389 Hamilton St., Albany, N. Y.

No. 13.—Farm of 152¼ acres; located 2 miles from P. O. and railway station at Voorheesville, on line of D. & H. and West Shore R. R.; ¾ mile from school; 2¼ miles from churches and 2½ miles from milk station. Highways, good. Nearest city, Albany, population 107,979, 12 miles distant, reached by rail and highway. General surface of farm, slightly rolling. Nature of soil, sand and clay loam. Acres that can be used as meadow, 142¼. Acres in natural pasture, 10; in timber, 4, pine, hemlock and hardwood. Acres tillable, 142¼. Fruit, 200 apple, 70 pear and 70 plum and cherry trees. Adapted to hay, rye, oats, corn, buckwheat and wheat. Fences, mostly wire, fair condition. House, large double, good condition. Outbuildings, barn, 50x50; open shed, 48x38; large wagon shed, 2 horse stables, corn house, hog house, cow stable and 2 poultry houses. House and barns watered by wells and cistern; fields, by wells and stream. Occupied by tenant. Reason for selling, other business. Price, \$7,000. Terms, ½ cash, balance on mortgage. Address, Newton J. Fryer, Guilderland Center, N. Y.

No. 14.—Farm of 98 acres; located 1 mile from Altamont, on line of D. & H. R. R.; 1 mile from school, churches and milk station. Highways, level but rough. Nearest village, Altamont, population 805, 1 mile distant. General surface, rolling to level. Altitude 445 feet. Nature of soil, gravelly and clay loam. Acres that can be used as meadow, 75; in natural pasture, 3; in timber, 18, mixed second growth. Acres tillable, 75. Fruit, 700 pear, 200 apple and 540 peach trees. House, in fair condition, 24x30, with kitchen, 14x16. Outbuildings, hay barn with one story wagon house, 45x56; horse stable, 24x30; hay barn, 30x40. House watered by well; barns, by two wells; fields, by springs. Near Helderberg Mountains. Occupied by owner.

Price, \$7,800. Terms, cash, might take mortgage from good party. Address, O. V. Crounse, owner, Altamont, N. Y.

No. 15.—Farm of 76 acres; located 1 mile from Guilderland P. O.; ¾ mile from Guilderland Center, on line of West Shore R. R.; 1 mile from school, churches and milk station. Highways, good. Nearest city, Albany, population 107,979, 11 miles distant, reached by rail and highway. General surface, rolling and level. Nature of soil, clay loam and gravel. Acres used as meadow, 66; in natural pasture, 6; in timber, 4, pine, hemlock and oak. Acres tillable, 66. Fruit, 175 apple trees and some small fruit. Best adapted to corn, oats, rye and hay. Fences, wire, in fair condition. House, 9 rooms, in good condition. Outbuildings, barn, 43x51, in good condition; 2 wagon houses, in good condition; poultry house, 12x30, and hog house. Watered, house, by cistern; fields, by creek. Occupied by owner. Reason for selling, illness in family. Price, \$5,000, ½ cash and remainder on mortgage. Address, William Spoor, owner, Altamont, N. Y., R. D. 3.

TOWN OF KNOX

Population 1,101

No. 16.—Farm of 170 acres; located 1¼ miles from Knox P. O., R. D. 1; 5 miles from railway station at Altamont, on line of D. & H. R. R.; 1¼ miles from school and churches; 3 miles from milk station. Highway, state road. Surface of farm, part rolling, sloping to east. Soil, fertile loam. Acres in meadow, 160; in timber, 10, pine, hemlock, elm and ash. Acres tillable, 160. Fruit, 50 apple, 12 pear, 15 plum and 5 cherry trees; also currants, berries and grapes. Best adapted to hay, oats, buckwheat, corn and potatoes. Fences, stone and wire, good condition. House, 46x24; wash house and wood house, 20x24. Outbuildings, barn, 40x46, shed attached, 24x46; barn, 22x70, with 5 stalls for horses; wagon house, 24x60; sheep house, 20x30; ice house, 20x16; hog house, 16x24; machine house, 26x36; poultry house, 16x24. Watered, house by well and cistern, barns by well, fields by never-failing spring. This farm is 5 miles from Thompson's and Warner's lakes. Occupied by tenant. Reason for selling, ill health of owner. Price, \$6,000. Terms, cash or part cash and remainder on easy terms. Address Amaziah Saddlemire, owner, Knox, N. Y., Box 33.

FIG. 1.—HOUSE ON FARM NO. 12, TOWN OF GUILDERLAND, ALBANY COUNTY.

FIG. 2.—VIEW ON FARM NO. 35, TOWN OF WESTERLO, ALBANY COUNTY.



No. 17.— Farm of 180 acres; located 4 miles from Berne P. O., R. D. 1; 7 miles from railway station at Altamont, on line of D. & H. R. R.; $\frac{1}{2}$ mile from school; $2\frac{1}{4}$ miles from churches; 4 miles from butter factory and milk station. Highways, good. Nearest large village, Altamont, population 805, 7 miles distant, reached by state road. Surface of farm, mostly level. Soil, fertile loam. Acres in meadow, 150; in timber, 30, pine, hemlock, beech and maple. Acres tillable, 150. Fruit, 40 apple, 6 pear and plum trees. Adapted to hay, oats, buckwheat, corn, potatoes and hops. Fences, stone and wire. House, 32x24, with kitchen and wood house attached, 20x20, good condition. Outbuildings, good barn, 32x46; barn, 32x50; cow barn, 32x40; wagon house, 20x26; hop house, 20x44; hog house, 16x20. Watered, house by cistern and well, barns by creek and well, fields by creek and spring. Occupied by tenant. This farm is 6 miles from Thompson's and Warner's lakes. Reason for selling, ill health of owner. Price, \$5,000. Terms, cash or part cash. Address Amaziah Saddlemire, owner, Knox, N. Y., Box 33. Owner will rent.

TOWN OF NEW SCOTLAND

Population 2,924

No. 18.— Farm of 35 acres; located 4 miles from railway station at Voorheesville, on line of D. & H. and W. S. R. R.; 2 miles from New Scotland, on line of W. S. R. R.; P. O., Delmar R. D. No. 1; $\frac{1}{4}$ mile from school and 3 miles from churches. Highways, good. Nearest city, Albany, population 107,979, 11 miles distant, reached by rail or highway. General surface of farm, hilly; fields, level and rolling. Altitude, 500 feet. Nature of soil, limestone and loam. Acres tillable, 7. Fruit, 17 apple, 17 pear, 110 plum, 4 peach, 6 cherry trees and 4 grape vines. Best adapted to poultry, small fruit and gardening. Fences, wire, poor condition. House, 7 rooms, good condition, but needs painting. Outbuildings, barn, 20x24, fair condition; hog pen, good condition; 2 poultry houses, new, 10x20 and 8x8. Watered, house, by well and cistern. Occupied by owner. Reason for selling, ill health. Price, \$1,000. Terms, cash. Medium size hemlock and pine timber on farm, saw and planing mill at New Scotland. Address, E. N. Crane, Delmar, N. Y., R. D. No. 1.

No. 19.— Farm of 235 acres; located 2 miles from Feura Bush, on line of West Shore R. R.; $\frac{1}{4}$ mile from school; $1\frac{1}{2}$ miles from church and 2 miles from butter factory. Highways, state road. Nearest city, Albany, population, 107,979, 11 miles distant, reached by highway. General surface of farm, partly level. Nature of soil, sandy and clay loam. Acres in natural pasture, 10; in timber, 25, maple, hickory, pine and hemlock. Adapted to hay, rye, wheat and buckwheat. Fences, board, pole and wire, poor condition. House, 12 large rooms. Outbuildings, barn, 40x80; barn, 40x40; wagon house, 18x24; shed, 24x40; corn crib; pig pen; shop and cider house, 24x30. Watered, house, by well, barns, by creek, and fields, by spring and creek. At foot of Helderberg Mountains. Occupied by tenant. Reason for selling, to settle estate. Price, \$12,000. Terms, \$6,000 cash, balance on mortgage. Address, C. S. Shear, owner, Ravena, N. Y., R. D.

No. 20.— Farm of 105 acres; located 1 mile from Voorheesville, on line of D. & H. R. R.; 1 mile from school, churches and milk station. Highways, good. Nearest city, Albany, population, 107,979, 12 miles distant, reached by rail and state road. General surface, rolling. Altitude, 500 feet. Nature of soil, clay and gravel. Acres that can be used as meadow, 60; in natural pasture, 12; in timber, 10, oak, hemlock and pine. Acres tillable, 80. Fruit, 20 acres of apples, all varieties. Best adapted to rye, wheat, and oats. Wire fences in fair condition. House, $1\frac{1}{2}$ stories, 10 rooms, fair condition. Outbuildings, main barn, 44x82x16, good condition; wagon shed and cow stable, 24x80x16. Watered, house and barns, by well; fields, by spring; 3 miles from Helderberg Mountains; 6 miles from Thompson's and Warner's lakes. Occupied by owner. Reason for selling, old age. Price, \$15,000. Terms, \$5,000 cash, balance on mortgage. Address, Mynard Defreest, owner, Voorheesville, N. Y.

No. 21.— Farm of 172 acres; located 4 miles from Altamont; 1 mile from railway station at Meadowdale, on line of D. & H. R. R.; $\frac{1}{4}$ mile from school; 2 miles from churches; 1 mile from milk station. Nature of highways, dirt and state road. Nearest city, Albany, population, 107,979, 12 miles distant, reached by rail and highway. General surface,

level, part rolling. Nature of soil, gravel and black loam. Acres that can be used as meadow, 160; in timber, 12, pine, elm, maple and some chestnut. Acres tillable, 160. Fruit, about 400 apple and 100 pear trees; few cherries and plums. Best adapted to rye, oats and corn. Fences, fair condition. House, 10 rooms, fine condition. Outbuildings, 2 barns, wagon house, stable, cow barn and shed, tool house, poultry house and hog house, all good condition. House and barn watered by well and cistern; fields, by springs, brooks and wells; 1 mile from Helderberg Mountains. Occupied by owner. Reason for selling, old age. Price, \$7,500. Terms, will leave part on mortgage. Address, Andrew Smith, owner, Altamont, N. Y., R. D. No. 3.

No. 22.—Farm of 84 acres; located $\frac{3}{4}$ mile from Voorheesville, on line of D. & H. and W. S. R. Rs.; 1 mile from school, churches and milk station. Highways, good. Nearest city, Albany, population, 107,979, 11 miles distant, reached by rail and highway. General surface, rolling. Altitude, 250 feet. Nature of soil, sandy loam and clay. Acres that can be used as meadow, all; in natural pasture, 5; in timber, 2, oak and pine. Acres tillable, nearly all. Fruit, a few apple trees. Best adapted to hay, oats and rye. Wire fences, fairly good. House and barns watered by well; fields, by creek; 3 miles from Helderberg Mountains and Thompson's Lake. Occupied by tenant. Reason for selling, retired farmer. Price, \$4,000. Terms, cash. Address, Adam B. Relyea, owner, Voorheesville, N. Y.

TOWN OF RENSSELAERVILLE

Population 1,619

No. 23.—Farm of 187 acres, 2 miles from Preston Hollow and 14 miles from Middleburg, population, 1,059; 2 miles from school and churches. Roads in the vicinity, good. Nature of soil, sand and gravelly loam; 30 acres of meadow; 40 acres of natural pasture; 30 acres of timber; about 100 acres tillable. Fruit, orchard of 30 trees. Adapted to all kinds of crops. Altitude, 1,500 feet. Fences, stone, in poor condition. House, 30x40, 2 stories, needs painting. Barn, 30x40, 2 stories. Wagon house and sheep barn. Premises watered by springs. Catskill Mountains, 12 miles distant. Reasons for selling, poor health of the owner. Price, \$2,000. Terms, half cash. Name and address of owner, J. M. Watson, Preston Hollow, N. Y.

No. 24.—Farm of 135 acres; located $2\frac{1}{4}$ miles from Rensselaerville P. O.; 17 miles from railway station at Voorheesville, on line of D. & H. and West Shore Railroads; $\frac{3}{4}$ mile from school; $2\frac{1}{4}$ miles from churches and butter factory. Highways, level and good. General surface of farm, part level and part rolling, facing east. Altitude, 1,300 feet. Nature of soil, loam. Acres that can be used as meadow, 80; in natural pasture, 20; in timber, 18; beech, maple, ash and hemlock. Acres tillable, 95. Fruit, apples, about 65 trees. Adapted to oats, corn, potatoes, buckwheat and rye. Fences, stone wall and wire, good condition. House, 22x44, kitchen and wood house attached, fair condition. Old-fashioned fire place in house. Outbuildings: barn, 22x44; shed, hog house, barn, 22x40; barn, 30x50; cow stable attached, wagon house. House watered by well; barns by never failing stream, and fields by brook and streams. Lake Myosotis, $2\frac{1}{2}$ miles and Crystal Lake, 5 miles distant. Occupied by owner. Reason for selling, other business. Price, \$1,800. Terms, half cash. This property is $\frac{3}{4}$ mile from road, auto bus runs from Rensselaerville to Albany. Rural delivery passes door. House is newly painted and roofed. Address, M. S. Lasher, owner, R. D., Berne, N. Y.

No. 25.—Farm of 160 acres; located 2 miles from Medusa P. O., R. F. D. 1; 12 miles from railway station at Cairo; $\frac{1}{8}$ mile from school; 2 miles from butter factory and Protestant churches. Highways, good, somewhat rolling. Nearest city, Albany, 24 miles distant, population, 107,979, reached by auto bus. Surface of farm, rolling. Soil, loam. Acres in meadow, 35; in natural pasture, 25; in timber, 40; good hemlock and hardwood; acres tillable, 85. Fruit, 200 apple, 20 pear, 20 peach, 20 cherry and 20 plum trees. Adapted to corn, oats, rye and buckwheat. Fences, stone wall and wire. House, 2 stories, 14 rooms, good condition. Outbuildings: barn, 34x46, 2 stories, with wing, 18x24; barn, 30x40, with wing, 16x30; wagon house and stable, 30x50; hog and poultry house. Watered, house, by running water and well; barn, by running water and spring; fields, by brook and springs. This farm is 5 miles from Catskill Mountains and Crystal Lake. Occupied by owner. Reason for selling, owner cannot do the

work. Price, \$3,600. Terms, cash. Address W. A. Mackey, owner, Medusa, N. Y., R. D. No. 1, Box 42.

No. 26.— Farm of 166 acres; located 2 miles from Medusa and 5 miles from Greenville P. O., R. D. 1; 12 miles from railway station at Cairo, on Catskill Mountain R. R., and 17 miles from West Cossackie or Ravena, on West Shore R. R.; 1 mile from school; 1 mile from Methodist church; 2 to 5 miles to churches of other denominations; 2 miles from butter factory. Roads, good. State roads from Greenville to Cossackie and from Rensselaerville to Albany. Nearest city, Albany, population, 107,979, distant 30 miles, reached by highway or rail from West Cossackie. Surface, rolling. Altitude, 1,000 feet. Soil is good clay loam. Twenty acres of meadow; 25 acres of natural pasture; about 35 acres of timber, hemlock, maple, beech, white ash, elm, basswood, etc.; acres tillable, 86. There is an old neglected apple orchard of about 3 acres, Newtown Pippins, also a good many younger apple trees, some of which have been grafted while others need topworking and pruning, also a few pear trees. Land is adapted to dairying, fruit and all general farm crops. Fences, stone wall and new wire. There is a good 2-story house, 26x36, and extensions, 16x30, with excellent cellar; barn, 30x40, with 30-foot extension, stanchions for 14 head of cattle; barn, 26x60, with 20-foot posts, stalls and carriage room; 2-story grain house, 18x26; 2 poultry houses, 8x15 and 15x18. Buildings, good condition. House has well and cistern. Barns have wells. Fields have springs, and are also watered by the Eight Mile Creek, running through northwest portion of farm. Occupied by tenant. Reason for selling, old age of owner. Price and photograph on application. Terms, cash or half cash, with balance on mortgage at 5%. Only 2 miles to one of the best creameries in the state, saw and grist-mills. Address, Eugene Spalding, owner, Greenville, Greene County, N. Y.

No. 27.— Farm of 175 acres; located 2 miles from Potter Hollow P. O.; 14 miles from railway station at Middleburg, on line of M. & S. R. R.; 2 miles from school and churches; 2 miles from butter factory. Highways, hilly, but good. Nearest village, Middleburg, population, 1,059, 14 miles distant, reached by highway. General surface, rolling. Altitude, 1,500 feet. Nature of soil,

gravelly. Acres that can be used as meadow, 60; in natural pasture, 80; in timber, 35, pine, hemlock, ash, oak, beech and maple. Acres tillable, 130. Fruit, about 75 apple, 6 pear, 25 plum and 10 cherry trees. Adapted to corn, wheat, rye, oats and buckwheat. Fences, wire, rail and stone wall, fair condition. House, 30x50, 1½ stories, fair condition. Barn, 30x40; barn, 24x50; barn and shed, 30x40; all in fair condition. Watered, house, barn and fields, by springs. Reason for selling, to close estate. Price, \$3,000. Terms, ½ cash, balance on mortgage. Address, Edward D. Cook, owner, Potter Hollow, N. Y.

No. 28.— Farm of 192 acres; located 4 miles from Preston Hollow; 12 miles from railway station at Middleburg, on line of M. & S. R. R.; short distance from school; 4 miles from churches and butter factory. Highways, hilly, but good. Nearest city, Albany, population, 107,979, 32 miles distant, reached by state road, except 4 miles. Altitude, 1,200 feet. Nature of soil, clay subsoil, very productive. Acres that can be used as meadow, 75; in natural pasture, 75 or 80; in timber, 30, hemlock, ash, oak, beech, maple and basswood. Acres tillable, 150. Fruit, 200 apple, 40 pear, 8 cherry and 12 plum trees. Adapted to general farm crops. Fences, stone wall and wire, good condition. Ten-room house, nearly new. Outbuildings, barn, 28x52, 14-foot posts; barn, 24x40, 14-foot posts; horse barn, 28x30, 16-foot posts; 3 poultry houses, hog house and other sheds, all in good condition. House watered by cistern and well; barns, by brook in yard; fields, by living springs. Three miles from Crystal Lake. Occupied by owner. Reason for selling, failing health. Price, \$3,000. Terms, \$2,000 cash, balance on mortgage. Address, Adelbert E. White, owner, Preston Hollow, N. Y., Box 71.

TOWN OF WESTERLO

Population 1,263

No. 29.— Farm of 155 acres; located 1½ miles from South Berne P. O.; 12 miles from railway station at Voorheesville, on line of D. & H. R. R.; ½ mile from school; 1½ miles from churches, 1½ miles from butter factory. Highways, good. Nearest city, Albany, population, 107,979, 24 miles distant, reached by highway. General surface of farm, level and rolling. Altitude, 1,200 feet. Nature of soil, clay loam. Acres in pasture,

20; in timber, 8, second growth, maple, ash, beech and hickory. Acres tillable, 140. Fruit, small apple orchard. Adapted to hay, oats, barley, rye, buckwheat and corn. Fences, rail and wire. House, 8 rooms, wood house and kitchen. Outbuildings, wagon house and stable, 18x32x14; barn, 34x58x12; hog house, 16x20; small poultry house. House, barn and fields watered by wells and springs. Occupied by tenant. Reason for selling, old age. Price, \$20 per acre. Terms, $\frac{1}{3}$ cash. Address, John W. Hays, owner, Brookview, N. Y. Will rent.

No. 30.—Farm of 150 acres; located on R. F. D. 14 miles from railway station at Ravena on line of W. S. R. R.; $\frac{1}{2}$ mile from school; $1\frac{1}{2}$ miles from butter factory and Protestant churches. Highways, good. Nearest city, Albany, population, 107,979, 20 miles distant, reached by state road. Surface of farm, rolling and level. Altitude, 1,000 feet. Soil, loam. Acres in meadow, 124; in natural pasture, 16; in timber, 10; beech, maple, hemlock, good; acres tillable, 124. Fruit, 200 apple, 25 pear trees, also cherries and plums. Adapted to corn, oats, rye, buckwheat and hay. Fences, woven wire and barbed wire, good. House, 8 rooms, $1\frac{1}{2}$ stories, woodshed attached. Outbuildings; barn, 24x40; barn, 20x50; barn, 30x60, good condition; also poultry house, 12x16, and hog pen, 12x16; good condition. Watered, house, by well; barns, by well and creek; fields, by springs and creeks. Occupied by tenant. Reason for selling, poor health of owner. Price, \$2,200. Terms, easy. Address Fred Winegard, owner, Westerlo, N. Y.

No. 31.—Farm of 185 acres; located 2 miles from South Westerlo P. O.; 14 miles from railway station at Ravena, on line of W. S. R. R.; 1 mile from school and church; 2 miles from butter factory. Highways, somewhat hilly but good. Nearest city, Albany, population, 107,979, 25 miles distant, reached by highway or rail from Ravena. Surface of farm, nearly level, southern exposure. Altitude, about 1,500 feet. Soil, clay sub-soil. Acres in meadow, 125; in natural pasture, 35; in timber, 25, variety, mostly hemlock; all tillable, except woodland. Fruit, apples, pears, grapes, plums. etc. Adapted to hay, oats, buckwheat, corn and potatoes. Fences, stone and wire, fair condition. Large house in good condition.

Outbuildings, good sized barns, which need some repairs, new poultry house, with well fenced yards. Watered, house and barn, by running water; fields, by springs. Occupied by tenant. Reason for selling, owner a widow and cannot attend to farm. This is a fine dairy farm. Price, \$3,800. Terms, part cash, remainder on mortgage. Auto bus runs from So. Westerlo to Albany. Address Emily R. Wickes, owner, South Westerlo, N. Y. Owner will rent for money or on shares, with option to buy.

No. 32.—Farm of 75 acres; located 1 mile from Westerlo P. O., R. D. 1; 15 miles from railway station at Ravena, on line of West Shore R. R.; 1 mile from school and churches; 1 mile from butter factory. Highways, good. Nearest city, Albany, population, 107,979, 20 miles distant, reached by state road and rail. General surface, rolling. Altitude, 1,000 feet. Nature of soil, gravel loam. Acres in timber, 20, pine, hemlock and ash; acres tillable, 50. Fruit, 75 apple trees. Adapted to hay, rye, oats corn and buckwheat. Fences, stone, fair condition. House, 20x30; wing, 20x30. Outbuildings: barns, 30x40 and 20x30; shed, 16x20; hog house, 12x20. House watered by well and cistern; barns, by well; fields, by creek and springs. Occupied by tenant. Reason for selling, to close an estate. Price, \$1,800. Terms, \$900 cash. Address, B. T. Briggs, administrator, Alcove, N. Y. Owner will rent.

No. 33.—Farm of 128 acres; located 2 miles from Westerlo P. O., R. D. 1; 16 miles from railway station at Ravena, on line of West Shore R. R.; school on farm; 2 miles from churches; 2 miles from cheese factory. Highways, good. Nearest city, Albany, 20 miles distant, population, 107,979, reached by rail and state road. General surface, rolling. Altitude, 1,000 feet. Nature of soil, black and clay loam. Acres in meadow, 35; in timber, 12, hemlock, pine and ash; acres tillable, 100. Fruit, about 25 apple trees. Best adapted to rye, oats, corn and hay. Fences, stone, fair condition. House, 20x30, $1\frac{1}{2}$ stories. Outbuildings: barn, 42x54, 2 floors; barn, 20x60; shed, 16x70. House watered by well; barns, by springs; fields, by creek. Occupied by tenant. Reason for selling, to close an estate. Price, \$3,000. Terms, \$1,000 cash, balance on mortgage. Address, B. T. Briggs, administrator, Alcove, N. Y.

No. 34.— Farm of 114½ acres; located ½ mile from South Westerlo P. O., R. D. 1; 13½ miles from railway station at Ravena, on line of West Shore R. R.; ½ mile from school, churches and butter factory. Nearest city, Albany, population, 107,979, 23½ miles distant, reached by highway. Highway, state road. Altitude, 500 feet. General surface, rolling. Acres in meadow, 85; in pasture, 30; in timber, 5, hemlock and hardwood. Acres tillable, 90. Fruit, 50 apple trees, varieties. Adapted to general farm crops. Fences, wire and stone, fair condition. House, new, 8 rooms. Barn, 50 feet long, good condition. House watered by well, barn by well and spring, fields by brook. Occupied by owner. Reason for selling, has other farm. Price, \$2,500. Terms, \$1,500, balance on mortgage. Address, Louis W. Reynolds, owner, South Westerlo, N. Y.

No. 35.— Farm of 80 acres; located 2 miles from Dormansville P. O., R. D. 1; 13 miles (state road) from railway station at Ravena, on line of W. S. R. R.; 1 mile from school; 2 miles from churches, and 2½ miles from butter factory. Highways, good. Nearest city, Albany, population, 107,979, 16 miles distant, reached by highway. General surface, mostly level. Altitude, 1,200 feet. Good strong soil, clay subsoil. Acres that can be used as meadow, 65; in natural pasture, 10; in timber, 5, beech, maple, hickory and basswood. Acres tillable, 70. Fruit, 160 apple, 14 pear and some plum trees. Best adapted to hay

and grain. Fences, wire and stone wall, fair condition. House, 14 rooms, 28x40; wing, 13x16; ell, 22x30, good condition. Outbuildings, barn, 30x40; shed, 20x40; shed, 20x38; good stables; silo, 12x24; horse barn, 30x50; 4 poultry houses, 18x18, 14x16, 12x12 and 12x12, all in good condition, newly painted. House watered by well, barns by well, fields by springs. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$3,500. Terms, ½ cash, balance on mortgage. Address, E. J. Hunt, owner, Dormansville, N. Y.

No. 36.— Farm of 270 acres; located 4 miles from Greenville; 10 miles from Ravena, on line of West Shore R. R.; ½ mile from school; 3 miles from churches; 4 miles from butter factory. Highways, good dirt road. Nearest village, Greenville, 4 miles distant, reached by highway. General surface, rolling. Acres in natural pasture, 25; in timber, 50, hickory and some other hard wood. Acres tillable, 200. Fruit, 950 apple trees. Adapted to corn, oats, rye, wheat and buckwheat. Fences, stone and wire, in fair condition. House, 3 stories, stone, 30x30. Outbuildings, 2 barns, 34x40; shed, 18x70; cow stable, 20x16; hog house, 14x18; poultry house, 13x30; corn house, 12x16; also tenant house and barn. Watered, house and barns, by springs; fields, by running water. Reason for selling, desires to retire. Price, \$10,000. Terms: cash preferred but other arrangements can be made. Address, N. D. Cunningham, Greenville, N. Y. Owner will rent.

ALLEGANY COUNTY

Area, 1,047 square miles. Population, 40,216. Annual precipitation, 42.4 inches. Annual mean temperature, 47.5°. Number of farms, 4,937. Average value of farm lands per acre, \$37.32. County seat, Belmont.

Located in what is known as the southern tier of counties west of the center of the state.

The surface features are rough and mountainous. The county is traversed by deep valleys the sides of which are, in many places, too steep for cultivation. Some of the elevations are from 500 to 800 feet above the valleys and from 2,000 to 2,500 above tide water. The Genesee River flows northwest and a little to the west of the center of the county, and many of the tributaries of this river have cut deep valleys in different directions.

The soil of the county is known as a volusia soil. These soils are derived through feeble glaciation and consist of a gray, light brown or pale yellow silt loam. The volusia loam is the most important agricultural soil of the volusia series. The soil upon the upland is generally a heavy clay. This soil is excellently adapted to grazing, and wherever found dairying can be profitably engaged in. It is good soil for grains and general farming. Notwithstanding the roughness of the surface features, Allegany County contains many excellent farms and farm lands.

The lines of communication necessarily follow the valleys and pass in crooked lines throughout the county. There are more than fifteen hundred miles of graded and improved highways. There are many villages in the county but no large cities. The excellent school advantages are shown by the 245 district schools and Alfred University. This university, located at Alfred, offers a four-year course in agriculture.

Some of the leading crops of the county are as follows: Corn, 94,126 bushels; oats, 935,955 bushels; wheat, 28,147 bushels; barley, 39,000 bushels; buckwheat, 170,620 bushels; rye, 6,385 bushels; potatoes, 1,631,123 bushels; hay and forage, 175,297 tons. The county ranks fifth in the production of potatoes and fourth in the number of farms. There are twenty-two agricultural societies for the purpose of promoting agricultural interests and improvement of rural life.

The dairy interest is shown in the 39,573 milch cows found on the farms of the county. The other live-stock being horses, 13,542; swine, 14,062; sheep, 24,320; poultry, 187,579. The total value of all farm property is \$26,071,862, a small increase over that of 1900, namely, \$1.21 per acre.

TOWN OF ALFRED

Population 1,495

No. 37. Farm of 114½ acres; located 1 mile from Alfred P. O., and 3 miles from railway station at Alfred station, on line of Erie R. R.; 1 mile from school and churches; 5 miles from butter factory and 3 miles from milk station. General surface of farm, sloping. Nearest city, Hornell, population, 14,352, 12 miles distant, reached by rail and highway; auto bus, three times a day. Altitude, 2,000 feet. Nature of soil, clay loam. Acres that can be used as meadow, 75; in natural pasture, 38; in timber, 30, beech, maple, basswood and ash. Acres tillable, 85. Fruit, 11 pear, 50 apple and 4 plum trees. Best adapted to hay, oats, corn and potatoes. Fences, ½ woven wire, some barbed wire and rail, good condition. House, 15 rooms, besides hall and closets, in good condition, with large wood house attached. Outbuildings, cow barn with basement, 32x44, gambrel roof, with silo attached; hog house, 12x16; 2 poultry houses for 500 hens; horse barn, 24x36, with basement; 2 box stalls and shed attached, 28x32. House has hard and soft water in kitchen; barns watered by spring; fields, by springs and brook. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms, \$1,500 cash, balance on mortgage with small yearly payment. Price includes farm machinery. Address, J. E. Allen, owner, Alfred, N. Y.

TOWN OF AMITY

Population 2,015

No. 38.—Farm of 407 acres; located 4 miles from Belmont P. O., R. D. 3, and railway station, on line of Erie R. R.; ½ mile from school; 4 miles from butter factory, milk station, cheese factory and milk condensing plant. Highways, good. Nearest large village,

Wellsville, population, 4,595, 9 miles distant, reached by rail and highway. Surface of farm, level and rolling. Soil, black loam. Acres in meadow, 300; in natural pasture, 60; in timber, 40, beech, maple and chestnut. Acres tillable, 300. Fruit, apples, pears, plums and cherries. Best adapted to hay and grain. Fences, woven wire and rail. Two good houses, one of 12 rooms and one of 9 rooms. Outbuildings, barn, 26x70; basement barn, 30x40; horse barn, granary and hog house. Watered by springs and creeks. Occupied by owner. Reason for selling, ill health and advanced age of owner. Price, \$20 per acre. Terms, \$3,000 down, balance on time. Address, Mrs. H. S. Corbin, owner, Belmont, N. Y. Owner will rent.

TOWN OF ANGELICA

Population 1,718

No. 39.—Farm of 160 acres; located 2½ miles from Angelica on Shawmut R. R.; ¾ mile from school; 2¼ miles from churches; 2½ miles from butter factory, cheese factory and milk station. Highways, rather hilly, but in good condition. Nearest city, Olean, population, 17,925, 30 miles distant, reached by rail and highway. General surface of farm, slightly hilly. Nature of soil, clay loam. Acres in meadow, 80; in pasture, 60; in timber, 20. Fruit, apples, 40 or 50 trees. Adapted to hay, oats, barley, buckwheat, potatoes and corn. Fences, mostly wire, in fair condition. House, good size and nearly new. Horse barn, cow barn, silo, hog house and tool shed. Watered, house, by well; barn, by creek; fields, by spring and creek. Occupied by owner. Reason for selling, other business. Price, \$25 per acre. Terms, \$1,000 down and remainder on mortgage. Address, William Callman, Angelica, N. Y.

FIG. 3.—VIEW ON FARM NO. 37, TOWN OF ALFRED, ALLEGANY COUNTY.



No. 40.— Farm of 110 acres; located $\frac{3}{4}$ mile from Angelica, on line of P. S. & N. R. R.; $\frac{3}{4}$ mile from school, churches, cheese factory and milk station. Highways, good. Nearest city, Olean, population, 17,925, 30 miles distant, reached by rail and highway. General surface, rolling, slopes to southeast. Altitude, 1,450 feet. Nature of soil, loam, clay subsoil. Acres that can be used as meadow, 80; in natural pasture, 30, oak, hickory and pine. Acres tillable, 80. Fruit, young bearing orchard, mostly apples (50 trees) and 250 berry bushes. Adapted to hay, grain, corn, beans and potatoes. Fences, wire, good condition. Eight-room house, concrete cellar. No barn, new granary and wagon shed, good poultry house. Watered, house, by two wells; fields, by creek; 2 miles from Genesee River; $\frac{1}{4}$ mile from Angelica Creek. Occupied by owner. Reason for selling, unable to work farm. Price, \$4,500. Terms, \$2,000 cash, balance on mortgage. Address, W. C. Ketchum, owner, Angelica, N. Y.

No. 41.— Farm of 283 acres; located $1\frac{1}{2}$ miles from Angelica, on line of P. S. & N. R. R.; $1\frac{1}{2}$ miles from school, churches, cheese factory and milk station. Highways, part hilly. Nearest village, Angelica, population, 1,138, $1\frac{1}{2}$ miles distant, reached by highway. General surface of farm, hilly, rolling and level. Altitude, 1,600 feet. Nature of soil, yellow loam, clay subsoil, some stone. Acres that can be used as meadow, 75; in natural pasture, 125; in timber, 83, second growth, hardwood, mostly oak. Acres tillable, 75. Fruit, 30 apple trees. Adapted to grain, potatoes and buckwheat. Fences, American wire, rail and pine stump, fair condition. House, 1 story, 7 rooms, some repairs needed. Barn, 30x58; barn, 30x40, with basement; barn, 26x36; 2 of the barns need some repairs; tool house, 18x24. House and barns have running water from spring; fields, by springs. Occupied by tenant by month. Reason for selling, other business. Price, \$5,000. Terms, \$1,000 cash, balance in yearly payments of \$500. Address, S. G. Horner, Angelica, N. Y. Will rent.

TOWN OF BIRDSALL

Population 504

No. 42.— Farm of 214 acres; located 1 mile from Birdsall P. O., R. D. No. 1 and railway station, on line of Shawmut R. R.; 1 mile from school, churches, butter factory, cheese factory and milk station. Highways, good. General surface

features of farm, rolling, 50 acres level and hill pasture of 30 acres. Altitude, 1,300 feet. Nature of soil, clay and gravelly loam. Acres that can be used as meadow, 150; in natural pasture, 30; in timber, 34, hardwood. Acres tillable, 180. Fruit, 50 trees; apples, pears, cherries, plums and peaches. Adapted to potatoes, beans, hay, oats and buckwheat. Fences, American wire, new. Large house in fine condition. Basement barn, 40x60. House watered by drilled well, barns running water and fields by springs. Black River, 1 mile distant. Occupied by tenant. Reason for selling, lack of time to attend to farm. Price, \$5,500. Terms, half cash, balance on mortgage. Land very productive. Railroad 1,500 feet from buildings, switch at this point to load produce. Address Harry Craig, owner, Canaseraga, N. Y.

TOWN OF GROVE

Population 752

No. 43.— Farm of 250 acres; located 3 miles from Swain P. O.; 4 miles from railway station at Dalton, on line of Erie R. R.; 1 mile from school and cheese factory; 7 miles from milk station and 2 miles from Methodist Church. Highways, good condition. Surface of farm, nearly level. Soil, loam. Acres that can be used as meadow, 160; in natural pasture, 40; in timber, about 50, second growth. Acres tillable, 160. Fruit, two small apple orchards. Adapted to hay, oats, barley, beans, buckwheat and corn. Fences, mostly wire, need some repairing. House, 18x28, 2 stories, wing, 18x18. Outbuildings, 2 barns, protected barn yard, poultry house. Watered, house, by well; barns, by cistern; fields, by springs. Occupied by tenant. Reason for selling, ill health of owner. Price, \$7,000. Terms, \$2,000 cash, balance on long time. Address, George W. Carter, owner, Nunda, N. Y. Will rent.

TOWN OF HUME

Population 1,915

No. 44.— Farm of 175 acres; located 1 mile from Hume P. O., R. D., and 2 miles from railway station at Fillmore, on line of Pennsylvania R. R.; $\frac{3}{4}$ mile from school; 1 mile from churches; 2 miles from butter factory; 2 miles from cheese factory; 2 miles from milk station and 2 miles from condensing plant. Highways, state road. General surface, rolling and level. Altitude, 1,300 feet. Nature of soil, loam. Acres that can be used as meadow, 85; in natural pasture, 75; in timber, 25, hemlock,

oak and chestnut. Acres tillable, 75. Fruit, 80 apple trees. Adapted to grain, beans, potatoes and hay. Fences, good, woven wire and barbed wire. House, 18x24; wing, 18x20; good condition; bath room. Outbuildings: barn, 30x80, horse barn attached, 18x30; hog and poultry house, 12x18 and granary, 16x18. Occupied by owner. Reason for selling, wishes to retire. Price, \$5,500. Terms, \$2,000 cash, balance on mortgage. Address M. J. Marville, owner, Fillmore, N. Y.

TOWN OF RUSHFORD

Population 1,326

No. 45.—Farm of 154½ acres; located 4 miles from Houghton P. O., R. D. No. 1; 2 miles from railway station at Rushford, on line of Wellsville & Buffalo R. R.; ½ mile from school; 3 miles from churches; 5 miles from butter factory; 1 mile from cheese factory and milk station. Highways, good. General surface of farm, slightly rolling. Nature of soil, gravelly. Acres that can be used as meadow, 100; in natural pasture, 40; in timber, 15, hemlock, beech and maple. Acres tillable, 100. Fruit, 70 apple, 4 plum, a few cherry and pear trees. Adapted to corn, potatoes, grain and hay. Fences, woven wire, good condition. House, good condition. Barn, 70x30; barn, 50x30, with 20-foot posts and concrete floor; silo, with gambrel roof; hog pen, 26x30, with concrete floor; poultry house, 14x24, with concrete floor. Watered, house, by cistern and well; barns, by well, and fields, by creek and springs. Occupied by owner. Reason for selling, poor health. Price, \$8,000. Terms, \$2,500, cash, balance on mortgage at 5 per cent. Address, Melvin H. Crowell, owner, Houghton, N. Y.

TOWN OF WEST ALMOND

Population 462

No. 46.—Farm of 267 acres; located 8 miles from Belmont, on lines of Erie and B. & S. R. R.; 2 miles from school; 1 mile from church and cheese factory; ½ mile from milk station and 9 miles from condensing plant. Highways, good. General surface of farm, rolling. Altitude, 2,100 feet. Nature of soil, clay subsoil. Acres in meadow, 125; in pasture, 75; in timber, 67, beech, maple and basswood. Acres tillable, 200. Fruit, about 50 apple trees. Adapted to oats, buckwheat, barley and hay. Fences,

wire, fair condition. House, 60x40; 2 barns, one with gambrel roof, good condition, the other poor. House watered by spring; barns, by creek. Reason for selling, to settle estate. Price, \$4,500. Terms, \$500 cash, balance on easy payments, or \$4,000 cash. Address, Mrs. L. T. Peck, owner, Alfred, N. Y. Owner will rent.

No. 47.—Farm of 150 acres; located 8 miles from Almond; 4 miles from railroad station at Angelica, on line of Shawmut R. R.; ½ mile from school and churches; 8 miles from butter factory and condensing plant; ½ mile from cheese factory; 6 miles from milk station. Highways, mostly level. General surface, mostly level. Altitude, 2,100 feet. Nature of soil, clay subsoil. Acres in meadow, 60; in natural pasture, 70; in timber, 20, maple, beech. Acres tillable, 100. A few apple trees. Adapted to oats, buckwheat, hay and barley. Fences, wire, fair condition. House, 40x60; barn and silo, fair condition. Watered by spring piped to house; barns, by running water in yard; fields, by springs. Occupied by tenant. Reason for selling, to settle estate. Price, \$2,500. Terms, \$500 cash, balance on mortgage. Address, L. T. Peck, owner, Alfred, N. Y.

No. 48.—Farm of 192 acres; located 7 miles from Belmont P. O., R. D. No. 1; 3 miles from railway station at County House, on line of P. S. and N. R. R.; ¾ mile from school; 2½ miles from churches; 6 miles from butter factory; 2½ miles from cheese factory; 3 miles from milk station and 6 miles from condensing plant. Highways, good. Nearest village, Angelica, population, 1,138, 6 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, clay. Acres used as meadow, 80; in natural pasture, 80; in timber, 32, beech and maple, good size. Acres tillable, 100. Fruit, 40 apple trees. Best adapted to hay and oats. Fences, barbed wire, good condition. Nine-room house, good condition. Outbuildings, 2 barns, with basements, 30x40 and 28x26; poultry house and hog house. Watered, spring piped in house; barns, same and fields by springs and creek. Occupied by tenant. Reason for selling, have other farms. Price, \$2,500. Terms, \$500 cash, balance on mortgage at 5 per cent. Address, Frank S. Graham, owner, Scio, N. Y., R. D.

BROOME COUNTY

Area, 609 square miles. Population, 90,641. Annual precipitation, 38.27 inches. Annual mean temperature, 48.6°. Number of farms, 4,017. Average value of farm lands per acre, \$31, an increase of 9.8 per cent. since 1900. County seat, Binghamton.

Located in what is known as the southern tier of counties bordering on the Pennsylvania line.

The surface of the county is diversified with rolling uplands, broad intervalles and narrow valleys. Altitude of the hills ranges vary from 300 to 600 feet above the valley and 1,200 to 1,500 above tide water. Generally these hills are rounded and arable. Along the rivers, namely: Susquehanna, Chemung and Tioughnioga, the soil is exceptionally fertile, while the higher and hilly portions afford fine grazing and are well adapted for dairying, stock raising, and for fruit, especially apples, which are raised with great success wherever orchards are properly cared for. The value of all farm property is \$16,638,994. The total number of cattle is, dairy cows, 45,620; horses, 8,762; sheep, 9,600; poultry, 184,377. The production of principal crops was corn, 85,215 bushels; oats, 278,170 bushels; buckwheat, 154,982 bushels; potatoes, 708,114 bushels; hay and forage, 113,789 tons. Butter, wool and meat are well represented in the line of products. The production of milk was 16,069,529 gallons. Total receipts from the sale of dairy products, \$1,561,745. The lines of communication through this county afford excellent transportation facilities at low rates for ample market. There are no large tracts of timber, but most farms are well supplied with wood. Ponds, wells, springs and streams give abundant supply of excellent water. There are 207 district schools, a Pomona grange and ten subordinate granges, a cow testing association, poultry association, county agricultural societies, county fire relief association, which with the Binghamton Industrial Exposition, furnish educational advantages above the ordinary. There are 48 milk stations and factories in this county.

Transportation facilities are afforded by the Delaware, Lackawanna & Western, the Erie and the Delaware & Hudson railways, which traverse the county.

TOWN OF BINGHAMTON

Population 731

No. 49.—Farm of 125 acres; located 8 miles from railway station at Vestal, on line of D., L. & W. R. R.; ½ mile from school; 2 miles from churches; 1½ miles from butter factory; 8 miles from cheese factory, milk station and condensing plant. Highways, good. Nearest city, Binghamton, population, 53,668, 9 miles distant. General surface, rolling to level. Altitude, 1,300 feet. Nature of soil, loam and clay. Acres that can be used as meadow, 90; in natural pasture, 20; in timber, 15, chestnut and hard wood. Acres tillable, 100. Fruit, 40 apple, 10 cherry and 6 plum trees. Adapted to potatoes, hay, oats, corn, rye and buckwheat. Fences, rail and stump. House, 6 rooms, old. Barns, 32x40 and 26x80, good condition. House, watered by well; barns, by well; and fields, by springs. Quaker Lake, 2 miles distant and several other lakes from 3 to 6 miles distant. Occupied by owner. Reason for selling, other business. Price, \$3,500. Terms, ½ cash, balance on mortgage. Address, F. E. Sibley, owner, Binghamton, N. Y., R. D. No. 2.

TOWN OF COLESVILLE

Population 2,525

No. 50.—Farm of 130 acres; located 4½ miles from Harpursville, on line of D. & H.; 1 mile from school; 2 miles from church; 3½ miles from milk station. Highways, good. Nearest city, Binghamton, population, 53,668, 20 miles distant, reached by rail and highway. General surface of farm, rolling. Soil, loam. Acres in meadow, 80; in natural pasture, 25; in timber, 25, hemlock, ash, oak, beech and maple. Acres tillable, 105. Fruit, 400 apple, 3 pear, 2 cherry, 3 peach and 3 plum trees, currants and raspberries. Adapted to corn, oats, clover and timothy hay. Fences, barbed wire, nearly new. House, 9 rooms, in good condition. Outbuildings, basement barn, 40x76, concrete floor; barn, 26x48; 2 poultry houses and milk house. Watered, house, by well; barns and fields, by springs. Occupied by tenant. Reason for selling, poor health and other business. Price, \$4,500. Terms, \$2,500 cash, remainder on mortgage. Address, C. B. Eldred, Harpursville, N. Y.

No. 51.—Farm of 80 acres; located 3 miles from East Windsor, on D. & H. R. R.; 1 mile from school; 2 miles from churches; 3 miles from butter factory and milk station and 6 miles from condensing plant. Highways, state and dirt roads. Nearest city, Binghamton, population, 53,668, 20 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 10; in timber, 60, chestnut, maple, beech and birch; tillable, 20. Fruit, 20 apple, pear and cherry trees. Adapted to hay, oats, potatoes, rye and buckwheat. Fences, rail. House, 5 rooms, in good condition. Outbuildings, 1 barn, 20x30. Watered, house and barn, by well; fields, by springs. Reason for selling, other business. Price, \$1,200. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address, Volney K. Soule, Binghamton, N. Y.

TOWN OF MAINE

Population 1,339

No. 52.—Farm of 120 acres; 5 miles from railway station at Union, on line of Erie R. R.; $1\frac{1}{4}$ miles from Union Center, R. D.; $1\frac{1}{4}$ miles from school, churches and creamery. Altitude, 800 feet. Soil, clay loam. Acres in meadow, 85; in natural pasture, 25; in woodland, 10, beech and maple. Large, warm house. Several large barns and outbuildings, fair condition. Plenty of good water. Well fenced. Occupied by tenant. Reason for selling, old age. Price, \$5,500. Terms, \$1,500 cash, 15 years for balance. This is a good dairy or grain farm. Address A. E. Whittemore, owner, Union, N. Y., R. D. No. 2. Owner will rent.

TOWN OF NANTICOKE

Population 549

No. 53.—Farm of 135 acres; located 1 mile from Ketchumville P. O.; 7 miles from railway station, at Newark Valley, on line of L. V. R. R.; 1 mile from school, churches and butter factory; $2\frac{1}{2}$ miles from cheese factory; 1 mile from milk station and 7 miles from condensing plant. Highways, fair. Nearest village, Newark Valley, population 808, 7 miles distant, reached by highway. Surface, rolling. Soil, rich and fertile. Acres in meadow, 70; in natural pasture, 35; in timber, 30; hard wood; acres tillable, 90. Fruit, cherry, pear and apple trees, some small fruits. Fences, barbed wire, in good condition. House, 42 x 24, 2 stories, with wing, somewhat run down.

Outbuildings, barn, 36x40; granary and hog pen, 12x14. Watered, house by well, fields by creek and spring. Occupied by tenant. Reason for selling, poor health of owner. Price, \$2,300. Terms: agreeable to buyer. Address Charles Parsons, owner, Newark Valley, N. Y. Will rent.

No. 54.—Farm of 39 acres; located 3 miles from Lisle P. O., R. D. 1; 3 miles from railway station at Lisle and Whitney's Point, on line of D., L. & W. R. R.; 16 rods from school and 3 miles from churches, 3 miles from butter and cheese factories, milk station and condensing plant. Highways, $\frac{1}{2}$ hilly, $\frac{1}{2}$ level, part state road, balance dirt roads, good condition. Nearest city, Binghamton; population, 53,668, distance, 22 miles, reached by rail and highway. General surface, hilly and level. Nature of soil, loam and sandy strong soil. Acres in meadow, 16; in natural pasture, 18; in timber, 2. 100 sugar maples, beech, hemlock, ash and basswood; acres tillable, all except woods. Fruit, 117 apple trees, young pear and cherry trees, 2 crab apple. Fences, wire, all in first class order. Adapted to oats, potatoes, corn, rye, buckwheat, beans and alfalfa. House, ground floor space, 45x62; chamber room space, 24x36; 6 rooms, all new within last three years, open fireplace in living room; good cellar, never freezes and never has to be banked. Outbuildings: basement barn, 30x40, 3 box stalls, stanchions for 6 cows, poultry house, 2 stories, 12x16, good condition. House watered by well in house, also well $\frac{1}{2}$ rod from kitchen door, barn by creek within 3 rods. Occupied by owner. Reason for selling, other business. Price, \$2,000. Terms, \$800 down, balance 6%. Address Arthur C. Mathewson, owner, Lisle, N. Y.

TOWN OF WINDSOR

Population 2,384

No. 55.—Farm of 40 acres; located 1 mile from Windsor P. O., R. D., and $\frac{1}{2}$ mile from railway station at Windsor, on line of D. & H. R. R.; 1 mile from school; 1 mile from churches and butter factory; $1\frac{1}{2}$ miles from milk station and 5 miles from cheese factory. Highways, macadam road. Altitude, 800 feet. Soil, clay loam. Acres that can be used as meadow, 3; in natural pasture, 10; in wood, 25, chestnut fence posts, maple, etc. Acres tillable, 10. Fruit, cherries, pears, apples and grapes. Adapted to potatoes, corn and garden

HARVESTING OATS, PEAS AND BARLEY.



truck. Fences, wire, fair condition. House, two stories, 5 rooms. Barn, 20x30, new; small poultry house. Watered, house and barn by well, fields by springs. Occannum Creek runs through the place. Occupied by tenant. Reason

for selling, in other business. Price, \$500. Terms cash. This farm is located on Binghamton and Windsor Auto Bus Line. Suitable for poultry farm. Address Volney K. Soule, owner, Exchange Building, Binghamton, N. Y.

CATTARAUGUS COUNTY

Area, 1,250 square miles. Population, 72,756. Annual precipitation, 47.71 inches. Annual mean temperature, 47.4°. Number of farms, 6,017. Average value of farm lands per acre, \$34.94, an increase of 32.4 per cent. since 1900. County seat, Little Valley.

Located near the southwest corner of the state with its entire southern boundary on Pennsylvania.

The surface is a hilly, rolling upland, separated by deep valleys into distinct ridges having a north and south direction. Nearly the whole county is broken, but most of the hills are arable to their summit. In some instances they are too steep for proper cultivation but afford excellent pasturage. Toward the northern part the hilly or mountainous features are considerably modified. An unusual number of streams thread the county, the Allegany river and Cattaraugus creek being the principal ones. Most of these streams afford water power and could be made of great value for the use of the farmers. Good building stone is found in large quantities. The soil is rich and productive, highly adapted to hay and forage, dairying and general farming. There are excellent railroad facilities over which the products of the farm can reach ample markets, the city of Buffalo being but a very short distance to the northwest. There are forty miles of state road and 1,576 miles of improved highway.

The principal products of the county are as follows: Corn, 175,962 bushels; oats, 803,741 bushels; barley, 16,799 bushels; buckwheat, 209,281 bushels; potatoes, 879,253 bushels; hay and forage, 237,093 tons; maple sugar, 493,694 pounds. Fruit is successfully grown, the county standing number twelve in the production of apples and fifteen in the production of grapes. There were 5,556 farms reporting domestic animals as follows: milch cows, 59,779; horses, 13,888; sheep, 9,708; swine, 17,854; poultry, 235,088; dairy products amounted to 29,530,826 gallons of milk. The value of dairy products is given at \$2,608,086. The total valuation of all farm property is given at \$30,276,650, an increase of 32 per cent. since 1900. Churches of all denominations are scattered throughout the county. Thirty-two agricultural organizations assist in bettering agricultural and social conditions. The 343 district schools, together with the high schools of the villages, a State Normal School at Fredonia, and St. Bonaventure's College at Allegany afford excellent educational advantages.

The county is traversed by several trunk lines of railways and branches which give it transportation facilities of the highest order. The Erie, Pennsylvania, Pittsburg and Rochester and other lines pass through this county in all directions.

TOWN OF COLDSRING

Population 722

No. 56.—Farm of 153 acres; located 10 miles from Little Valley P. O., R. D. No. 2; 5 miles from railway station at Salamanca on line of Erie R. R.; school on farm; ½ mile from church; 4½ miles from cheese factory; 1¾ miles from milk station and 10 miles from condensing plant. Highways, good. Nearest city Salamanca, population 8,370, 5 miles distant, reached by highway. General surface of farm, rolling, slopes towards north. Altitude, about 500 feet. Nature of soil, dark loam. Acres that can be

used as meadow, 40; in natural pasture, 80; in timber, 33, hardwood. 150 young sugar trees. Acres tillable, 40. Fruit, 65 apple trees. Best adapted to corn, hay, oats and potatoes. Fences, wire, nearly new. House, 11 rooms, in excellent condition. Outbuildings, barn 30 x 60, with basement, good condition; silo, capacity 50 tons; tool barn and tenant house. Watered, house, by well; barns, by spring and fields, by spring and creek. Occupied by owner. Reason for selling, ill health of wife. Price \$4,500. Terms: \$3,000 cash, balance on mortgage. Address W. J. Casler, owner, Little Valley, N. Y., R. D. No. 2.

TOWN OF ELLICOTTVILLE

Population 1,844

No. 57.—Farm of 105½ acres; located 5 miles from Ellicottville P. O., R. D. No. 2, and railway station, on line of B., R. & P. R. R.; ½ mile from school; 3 to 5 miles from churches; ¾ mile from cheese factory and 5 miles from condensing plant. Highways, good, mostly level. Surface, 40 acres level, 40 rolling and 25 hilly. Altitude, 1,600 feet. Soil, gravel loam. Acres that can be used as meadow, 60; in natural pasture, 80; in timber, 15, second growth of hardwood. Acres tillable, 75. Fruit, 2 apple orchards, 4 pear, 1 cherry and 6 plum trees, also currants. Best adapted to corn, hay, oats and potatoes. Fences, barbed wire, good condition. House, 2 stories, good condition, 7 rooms below, unfinished above. Outbuildings: barn, 48 x 60, and shed for cows, fair condition; barn, 24 x 36, good condition; new combination hog house, poultry house and granary, 100 x 18, concrete floor. House and barns watered by pipes from spring, and fields by springs and creek. Occupied by owner. Reason for selling, wants a larger farm. Price, \$3,150. Terms, \$1,500 cash and 5 per cent. mortgage for balance with \$100 payable on principal yearly. Price includes all coarse fodder on farm. Address Nannen Bros., owners, Ellicottville, N. Y.

TOWN OF FARMERSVILLE

Population 976

No. 58.—Farm of 230 acres; located 2½ miles from Farmersville Station P. O., R. D. No. 1, and railway station on line of B., R. & P. R. R.; ½ mile from school; 2½ miles from churches and cheese factory; 2½ miles from condensing plant. Nearest village Franklinville, 6 miles distant, population 2,065, reached by good highway. General surface, rolling, some hilly. Acres in meadow, 75; in pasture, 100; in timber, 55; beech and maple, very good. Acres tillable, 90. Apple orchard. Best adapted to oats, barley, buckwheat and potatoes. Fences, good wire. House, 20 x 24, wing, 16 x 18, good conditions. Barn, 40 x 80, with gambrel roof, both house and barn nearly new. Watered, house and barns piped from spring, fields, by creek. Occupied by tenant. Reason for selling, owner has other farm, unable to take care of both. Price \$5,000. Terms, part down, balance on mortgage. Address Benjamin Georss, owner, Farmersville Sta., N. Y. Will rent.

TOWN OF FREEDOM

Population 1,124

No. 59.—Farm of about 200 acres; located 1¼ miles from Sandusky P. O. and railway station, on line of Buffalo & Susquehanna R. R.; ½ mile from school; 1½ miles from churches; milk taken at door; 5 miles from powdered milk factory; 1¼ miles from milk station. Highways, in good condition. Nearest large village, Arcade, population 1,568, 5 miles distant, reached by rail or highway. Surface of farm, rolling. Good soil. Acres in meadow, 100; in timber, 15, hemlock, maple, birch and beech. Fruit, 100 trees. Adapted to all crops grown in this climate. Fences, wire, fair condition. House, upright, 18x24; wing, 16x20, and wing, 16x30. Outbuildings, barn, 30x40, with wing, 26x30, and wing, 14x35, concrete floors. Watered, house and barn have fine water piped from springs. Occupied by owner. The house has fine bath, hot and cold water. Concrete milk house watered with pipes. Reason for selling, owner a widow. Price, \$8,000. Terms, easy. Address Mrs. Marriette J. Charles, owner, Sandusky, N. Y.

No. 60.—Farm of 243 acres; located 1 mile from Sandusky P. O., and railway station on line of B. & S. R. R., 1¼ miles from school; 1 mile from churches; 4 miles from cheese factory, milk station and condensing plant. Highways, level. Nearest village, Arcade, population 1,568, 4 miles distant, reached by rail. General surface, about ⅔ nearly level, some rolling. Altitude, 1,300 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 125; in natural pasture, 75; in timber, 30; beech, maple and some hemlock. Acres tillable, 175. Fruit, enough for family use. Adapted to beans, potatoes, corn, grain and hay. Fences, mostly wire. House, 1½ stories, good condition. Outbuildings, horse barn, 24 x 30, good condition, barn, 22 x 40, good condition. House has city water; barns, same and creek; fields, watered by creek. Occupied by tenant. Reason for selling, other business. Price, \$24 per acre. Terms, \$500 cash, \$200 in yearly payments. Address J. S. Charles, owner, Bliss, N. Y. Will rent.

No. 61.—Farm of 149 acres; located 2 miles from Farmersville P. O. and railway station, on line of Buffalo, Rochester & Pittsburg R. R.; 1 mile from school

and churches; 8 rods from milk station and 6 miles from condensing plant. Highways, dirt road, very good. Nearest village Franklinville, population 1,000, reached by highway. General surface of farm, very level. Nature of soil, gravelly loam. Acres that can be used as meadow, 125; in timber, 25, all maple trees. Fruit, 50 apple trees. Best adapted to hay, oats, corn and potatoes. Fences, mostly wire, good condition. House, 9 rooms, good cellar. Outbuildings, barn 80 x 36, gambrel roof; milk house; garage and shop 18 x 24, all equipped with lightning rods and all new. Watered, house by well, barns, by well, and fields, by creek. Occupied by owner. Reason for selling, ill health. Price \$13,000. Terms: \$3,000 cash, balance on mortgage at 5%. Address M. J. Wheeler, Delevan, N. Y.

TOWN OF NEW ALBION

Population 2,152

No. 62.—Farm of 165 acres; located 1½ miles from New Albion P. O.; 3½ miles from Cattaragus, on line of Erie R. R.; ½ mile from school, church and cheese factory; 3½ miles from milk station and 6 miles from powdered milk plant. House, large and in good condition. Barns, 2, in good condition. Good out-lard. Fences, wire, in good condition. Acres that can be used as meadow, 85; in natural pasture, 85; in timber, 80, second growth, maple and beech; acres tillable, 60. Best adapted to hay and grain. House watered by gravity spring; fields, by creek and several springs. Price \$4,900. Terms: \$1,000 more cash; balance on mortgage. Address A. P. Burroughs, owner, Suffern, N. Y. Owner will rent.

TOWN OF OLEAN

Population 1,324

No. 63.—Farm of 148 acres; located 2½ miles from Olean on Erie R. R.; 2½ miles from churches, butter factory, cheese factory, milk station and condensing plant. Highways, dirt roads. General surface, level and not hilly. Nature of soil, black loam. Acres in natural pasture, 66; in timber, 25 chestnut, oak and maple; tillable 15. Fruit, apple orchard. Adapted to hay, corn, oats and potatoes. Fences, wire and rail. House, large and in good condition. Outbuildings, new stucco

dairy barn, horse barn, garage, poultry house, tool house and tenant house, Watered, house and barns, by a compressed air system from a well; fields, by springs. Occupied by tenant. Reason for selling, other business. Price \$13,000. Terms: \$2,000 cash and remainder on mortgage. Address Dr. J. C. Earle, 913 Washington street, Olean, N. Y.

TOWN OF PERSIA

Population 1,800

No. 64.—Farm of 25 acres; located 1½ miles from Gowanda P. O., R. D. 3; 1½ miles from railway station at Gowanda, on line of Erie R. R.; ½ mile from school; 1½ miles from seven churches; 1½ miles from milk station. Highways, good. Surface, somewhat hilly. Soil, loam and gravel. Acres in natural pasture, 15; in timber, 10, beech, maple, chestnut, hemlock, etc.; acres tillable, 15. Adapted to wheat, corn, oats, potatoes, etc. Fences, wire. No house or barn. Watered by spring and brook. Occupied by tenant. There is a fine water power site at one end of place. Dam could be constructed 65 feet high and 110 feet long, giving a fall of 80 to 90 feet. Reason for selling, owner has too much land. Price, \$3,000 with water rights, or \$1,500 without water rights. There is also a large marl lime deposit. Terms to suit buyer. Address Norman B. Allen, owner, Gowanda, N. Y. Owner will rent for cash for term of 1 to 10 years, or with option to buy.

No. 65.—Farm of 50 acres; located 1½ miles from Gowanda P. O., R. D. 3; 1¼ miles from railway station at Gowanda, on line of Erie R. R.; ½ mile from school, 1½ miles from churches and ½ mile from cheese factory. Highways, good. Nearest village, Gowanda, population 2,524; reached by highway. General surface of farm, hilly. Soil, gravelly loam. Acres in meadow, 15; in natural pasture, 15; in timber, 20; chestnut and beech. Acres tillable, 15. Fruit, 25 apple trees. Adapted to general crops. Fences, wire, fair condition. Watered by never failing springs and brook. Occupied by tenant. There are no buildings on this property. Reason for selling, owner wishes to retire. Price, \$2,000. Terms: \$700 cash, balance to suit purchaser. Address Norman B. Allen, owner, 159 Main street, Gowanda, N. Y. Owner will rent.



TOWN OF SALAMANCA

Population 414

No. 66.—Farm of 136 acres; located 4 miles from Little Valley P. O., R. D. 2; $3\frac{1}{2}$ miles from railway station at Salamanca, on line of Erie, B., R., P. and Pa. R. Rs.; $\frac{1}{2}$ mile from school; 2 miles from Protestant churches; 40 rods from milk station. Highways, level. Surface of farm, some hilly and some level. Soil, good gravelly loam, part clay subsoil. Acres in meadow, 25; in natural pasture, about 50; remainder in timber, hard and soft wood. Fruit, about 70 apple trees. Fences, board and wire, good. Best adapted to grass, hay, oats and corn.

House, 10 rooms, 2 stories, good condition. Outbuildings: barn, 40x48; barn, 30x44, capable of holding 25 cows and 5 horses, silo, hog pen and poultry house, 20x26, fair condition. Watered, house, by well; barns, by spring and creek; fields, by spring and creek. Occupied by owner. Reason for selling, advanced age of owner. Price, \$50 per acre. Terms, $\frac{1}{2}$ down. Price includes all stock except 1 horse, buggy and cutter and one cow. Telephone in house. Trolley line about 2 miles from farm. Address J. N. Jones, owner, Little Valley, N. Y., R. D. 2.

CAYUGA COUNTY

Area, 752 square miles. Population, 65,751. Annual precipitation, 44.71 inches. Mean temperature, 50.4°. Number of farms, 4,785. Average price of farm land per acre, \$50.40. County seat, Auburn.

Located in the central part of the state in the inland lake section. Its boundaries are long, narrow and irregular, trending north and south. The northern line is bounded by Lake Ontario, the lower western part by Lake Cayuga and touching Skaneateles Lake on the east. Lake Owasco is located in the center of the county, not far from the city of Auburn.

The surface features of the county are undulating. The Seneca river traverses the upper half of the county with numerous small streams affording good water power and giving, with the ponds and lakes of the county, an abundant supply of excellent water.

The soil is very fertile, consisting of a fine quality of sandy or gravelly loam intermixed with clay, muck and alluvium in the northern part, and a very productive gravelly and clay loam in the southern part. Markets are easily reached over the New York Central, the Lehigh Valley and the electric lines that traverse almost every portion of the county. The highways are in excellent condition. Along the shores of Lake Cayuga are numerous quarries of water lime, quicklime, gypsum and sandstone.

There are reported on the farms of the county 103,173 domestic animals and 360,543 head of poultry. The products of the county are milk, 14,034,684 gallons from 27,199 dairy cows, the total receipts for all dairy products being \$1,251,408. The principal crops are corn, 850,149 bushels; oats, 1,210,652 bushels; barley, 300,512 bushels; buckwheat, 388,598 bushels; potatoes, 1,037,839 bushels; hay and forage, 151,721 tons. The county ranks first in barley and buckwheat, second in corn and poultry, fifth in honey and seventh in oats. Cayuga county is also an excellent fruit county. Apples, cherries, peaches, pears, plums and prunes are raised in abundance and are of the finest quality. There are scattered throughout the county a number of excellent district schools, high and graded schools, all up to the standard of excellence demanded by the state. Wells College for women is located at Aurora. The total value of farm property in this county is \$26,915,448, an increase of 19.8 per cent. over the value given in 1900.

TOWN OF CATO

Population 1,569

No. 67.—Farm of 172 acres; located 4 miles from Jordan P. O., R. D. No. 1; 2 miles from railway station at Brick Church, on line of L. V. R. R.; 3 miles from railway station at Jordan on line of N. Y. C. & H. R. and West Shore R. Rs. 15 rods from school; $1\frac{1}{2}$ miles from Methodist Church; 4 miles from butter

factory and creamery; 2 miles from milk station. Cream collected at the door. Highways, improved macadam, except the first $\frac{3}{4}$ of a mile. General surface of farm, slightly rolling. Nature of soil, subsoil with clay bottom, also some gravel land. Acres that can be used as meadow, 120; in natural pasture, 45; in timber, 40, maple, birch, spruce, elm and oak. Acres tillable, 125. Fruit, 75

**FIG. 4.—HOUSE AND BARN ON FARM NO. 66, TOWN OF SALAMANCA,
CATTARAUGUS COUNTY.**

apple trees, pears, cherries, plums and small fruits. Adapted to alfalfa, hay, grain, corn, potatoes, all crops grown in central New York, including fruits and tobacco. Fences, barbed and American wire, in fair condition. House, new windows and newly painted, 15 large rooms and attic, 44x35, with wing, 30x32; woodshed and extension, 30x18 feet. Outbuildings: main barn, 60x32, with leanto, 32x17, shed adjoining in which cows are stabled; wagon house, 40x24; tobacco shed, 63x30; tool shed, 30x26, and poultry house, 40x17. House watered by cistern and well, barns by well. Seneca River through which N. Y. S. barge canal runs adjoins the rear of the farm, where it is understood a dock will be erected. Occupied by tenant. Reason for selling, to settle an estate. Price, \$14,000. Terms, part payment, balance on mortgage. Address Mrs. Josie M. Bentley, owner, 179 Adams street, Brooklyn, N. Y., or C. E. Althouse, executor, Waldorf-Astoria, New York city.

TOWN OF IRA

Population 1,467

No. 68.—Farm of 184 acres; located 1 mile from Ira P. O. and railway station, on line of L. V. R. R.; 30 rods from school; 1 mile from churches; 4 miles from butter factory; 4 miles from cheese factory and 1 mile from milk station. Highways, improved road. General surface, level. Nature of soil, clay and limestone. Acres that can be used as meadow, 154; in natural pasture, 30; in timber, 30, mostly hard wood. Acres tillable, 150. Fruit, 150 bearing apple trees, peaches and small fruit. Adapted to dairying and general farm crops. Fences, fair condition. Large square house, 10 rooms, in good condition, newly painted. Barn built in 1913, 40x80, with basement, plank frame, gambrel roof with steel roofing, a small barn, poultry house and pig house. House watered by well, barns by well and fields by creek. Occupied by owner. Reason for selling, owner desires a smaller farm. Price, \$10,000. Terms, cash. Excellent alfalfa land, sap bush of over 300 trees. Address H. J. Wolven, owner, Ira Station, N. Y.

No. 69.—Farm of 128 acres; located 1 mile from Ira P. O., $3\frac{1}{2}$ miles from railway station, on line of L. V. R. R.; $\frac{1}{2}$ mile from school; 1 mile from churches, $3\frac{1}{2}$ miles from milk station,

and 3 miles from cheese factory. Highways, good. Nearest city Fulton, population 11,138, 11 miles distant, reached by highway. General surface, rolling. Nature of soil, clay and gravel loam. Acres that can be used as meadow, 110; in natural pasture, 3; in timber, 13, beech, maple, hemlock and elm. Acres tillable, 110. Fruit, apples, peaches, prunes, pears, grapes and currants. Best adapted to wheat, barley, oats, corn, tobacco and potatoes. Fences, fair condition. House, 10 rooms and 8 smaller rooms for clothes presses, etc. Outbuildings: barn, 36x78, with basement; tobacco shed, 24x50; hay shed, 24x48; corn house, with basement, 18x28; hog pen; poultry house, 12x60. House watered by running water, barns same. Occupied by tenant. Reason for selling, wishes to retire. Price, \$5,500. Terms, \$2,000 cash, balance on mortgage. Address Oscar A. Foote, owner, Cato, N. Y.

TOWN OF MENTZ

Population 1,901

No. 70.—Farm of 137 acres; located 1 mile from Port Byron P. O., R. D. No. 40; $\frac{1}{4}$ mile from railway station at North Port Byron, on line of N. Y. C. R. R.; $\frac{3}{4}$ mile from school; 1 mile from churches and butter factory and $\frac{1}{4}$ mile from milk station. Highways, state road, level. Nearest city, Auburn, population 32,468, 9 miles distant, reached by rail and highway. General surface, nearly level. Nature of soil, clay and gravel. Acres that can be used as meadow, 100; in natural pasture, 37; in timber, 3, young hickory. Acres tillable, 120. Fruit, apples, pears, peaches, quinces, raspberries, strawberries, enough for home use. Adapted to alfalfa, hay, wheat, oats, potatoes, beans, buckwheat, etc. Fences, woven wire, almost new. 16 room double house, hard wood floors, etc. Outbuildings, barn, 30 x 45, with sheds attached, horse barn and basement, 24 x 36, stalls for 5 horses, tie up for 14 cows. Watered, house by well; barns and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$13,000. Terms, \$8,000 cash, balance on mortgage. Address Nathan L. Rowe, owner, Port Byron, N. Y., R. D. 40. Will rent with option to buy.

TOWN OF NILES

Population 1,254

No. 71.—Farm of 105 acres; located $5\frac{1}{2}$ miles from Moravia on line of Lehigh Valley R. R.; $1\frac{1}{8}$ miles from school; 3

miles from churches; 2 miles from cheese factory and $5\frac{1}{2}$ miles from milk station. Highways, dirt roads. General surface of farm, level. Nature of soil, loam. Acres that can be used as meadow, 95; in natural pasture, 5 and in timber, 5, maple; acres tillable, 95. Fruit, 80 apple and 5 pear trees. Best adapted to potatoes, oats, barley and buckwheat. Fences, wire, in poor condition. House 24 x 24. Outbuildings, 3 barns 30 x 58, 26 x 36 and 30 x 40. Watered, house and barns, by well; fields, by spring. Occupied by tenant. Reason for selling, to close an estate. Price \$30 per acre. Terms, $\frac{1}{2}$ down and mortgage on remainder. Address W. J. Bell, Oswego, N. Y. or Mrs. W. D. Curtis, Moravia, N. Y.

No. 72.—Farm of 80 acres; located 4 miles from Owasco P. O., R. D. No. 11; 10 miles from railway station at Moravia and 12 miles from Auburn, on line of N. Y. C. R. R.; 1 mile from school; 4 miles from churches; 4 miles from butter factory; and 3 miles from milk station and cheese factory. Nature of highway, state road. Nearest city, Auburn, population 32,468, reached by highway. General surface, level and some fields rolling. Altitude, about 900 feet. Acres that can be used as meadow, all; in natural pasture, 4. Acres tillable, 75. Fruit, 40 apple trees, some pears, plums and cherries. Best adapted to hay and all kinds of grain, corn and potatoes. Fences, some woven wire, good condition. House, 40x30, wing, 22x14, 12 rooms, good condition. Outbuildings: barn, 45x40; wagon house, 25x20; granary, 16x16, 2 stories, basement under barn, concrete wall; corn crib, hog and poultry house, good condition. House watered by well and cistern, barns by well, fields by running water. Occupied by tenant. Reason for selling, has another farm. Price, \$4,000. Terms, easy. Address S. Z. Pennell, owner, Owasco, N. Y., R. D. No. 11.

No. 73.—Farm of 105 acres; located $5\frac{1}{2}$ miles from Moravia, on line of L. V. R. R.; $1\frac{1}{8}$ miles from school; 3 miles from churches; 2 miles from cheese factory and $5\frac{1}{2}$ miles from milk station. Highways, dirt and state road. Nearest village, Moravia, population 1,393, $5\frac{1}{2}$ miles distant, reached by highway. General surface, level. Altitude, about 1,000 feet. Nature of soil, loam. Acres

that can be used as meadow, 95; in natural pasture, 5; in timber, 5, second growth beech and maple. Acres tillable, 95. Fruit, about 80 apple trees, some pears, plums and cherries. Best adapted to potatoes, oats, buckwheat and barley. Fences, mostly wire, in poor condition. House, 28 x 28, in fair condition. Outbuildings, barn, 30 x 58, barn, 26 x 36, barn, 30 x 40 and hog house. Watered, house and barns, by well; fields, by springs. Occupied by tenant. Reason for selling, to close an estate. Price, \$30 per acre. Terms, $\frac{1}{2}$ cash and balance on bond and mortgage. Address Mrs. W. D. Curtis, Moravia, N. Y.

TOWN OF SENNETT

Population 1,481

No. 74.—Farm of 94 acres; located 2 miles from Auburn P. O., R. D. No. 6; $1\frac{1}{2}$ miles from railway station at Throopsville, on line of L. V. R. R.; 1 mile from country school and $1\frac{3}{4}$ miles from city school; 2 miles from churches and butter factory and $1\frac{1}{2}$ miles from milk station. Highways, state road under construction. Nearest city, Auburn, population 32,468, $\frac{1}{2}$ mile distant, reached by rail and highway. General surface of farm, level and rolling. Altitude, about 700 feet. Nature of soil, mostly loam, some heavier. Acres that can be used as meadow, 60; in natural pasture, 30; small amount in timber. Acres tillable, 65. Fruit, 36 apple, 3 cherry and pear trees. Adapted to all kinds of grain, hay, alfalfa and vegetables. Fences, mostly wire, in good condition. House, large, brick and frame with good attic. Outbuildings, 2 adjoining barns, 30 x 36; 40 x 50, with basement for stock; good poultry house 12 x 18; corn house and tool house. Watered, house, by well, barns have been supplied from spring by windmill; it is still piped but needs new windmill. Occupied by owner. Reason for selling, advanced age of owner. Price, \$20,000. Terms, cash. Address Mrs. Mary Price, Auburn, N. Y., R. D. No. 6.

TOWN OF VENICE

Population 1,402

No. 75.—Farm of 70 acres; located 3 miles from Moravia P. O. and railway station, on line of L. V. R. R.; $\frac{1}{2}$ mile from school; 2 miles from church and butter factory; $3\frac{1}{2}$ miles from cheese factory and milk station. Highways, good. Nearest village Moravia, population,

1,393, 3 miles distant, reached by highway. General surface of farm, slightly rolling. Nature of soil, gravelly loam. Acres in natural pasture, 10; in timber, 10; pine and hemlock. Acres tillable, 50. Fruit, for home use. Adapted to potatoes, buckwheat, oats, corn and hay. Fences, rail and wire, good condition. 10 room house, good condition. Barn, 30 x 48, good condition. Watered, house, by well; barns, by well; and fields, by brooks. Occupied by owner. Reason for selling, ill health. Price, \$50 per acre. Terms, \$1,000 cash, balance on mortgage. Address Wm. Jennings, Moravia, N. Y.

No. 76.— Farm of 105 acres; located 1 mile from Venice Center P. O. and railway station, on line of N. Y. A. & L. R. R.; 4 miles from butter factory; 1 mile from milk condensing plant. Highways, good. Nearest city, Auburn, population, 32,468, 15½ miles distant, reached

by rail and highway. Surface, partly level and partly rolling. Altitude, 1,100 feet. Good soil. Acres in meadow, 20; in natural pasture, 30; in timber, 10, beech, maple and basswood; acres tillable, 75. Fruit, apples, peaches, plums and pears. Adapted to all kinds of crops grown in this climate. Fences, wire, board and rail, not very good. House, 39x36, good condition. Outbuildings: barn, 30x90; horse barn, 30x36; cow barn; 2 poultry houses; hog house. Watered by well and spring. Reason for selling, advanced age and poor health of owner. Price, \$5,500. Terms, \$2,000, mortgage can remain. Would sell adjoining 80 acres with the 105 described above. There are two sets of buildings, two orchards and small fruits and 18 acres of timber on this property. Will sell both farms for \$9,500. Address Amos Emory Hutchinson, owner, Venice Center, N. Y.

CHAUTAUQUA COUNTY

Area, 1,099 square miles. Population, 116,818. Annual precipitation, 39.09 inches. Annual mean temperature, 50.3°. Number of farms, 7,500. Average price of farm land per acre, \$58.38. County seat, Mayville.

Located in the southwest corner of the State bordering on the waters of Lake Erie.

The surface features are mostly hilly and rolling upland. A bluff of 20 or 30 feet elevation extends along the lake front, and from its summit the land spreads out in an undulating region, gradually rising for a distance of three or four miles. This comparatively level tract is bordered by the declivities of a hilly upland which covers the central and southern portions of the county. These uplands are broken by deep valleys. The county is well watered, there being several small lakes in the uplands. The soil of the uplands is principally clay, mixed with disintegrated shale, generally known as flat gravel. In the valleys is found a fine quality of sandy and gravelly loam mixed with alluvium. Along the lake shore is a strip of very productive clay loam. The uplands of the county are all arable to their summits. This is the greatest grape producing county in the United States. The last census shows that 3,582 carloads of grapes, 1,225,000 gallons of grape juice and 750,000,000 gallons of wine were produced on the 35,000 acres of vineyard land. The other leading products are as follows: Corn, 500,850 bushels; oats, 846,513 bushels; buckwheat, 257,341 bushels; barley, 36,392 bushels; wheat, 19,379 bushels; potatoes, 778,277 bushels; hay and forage, 228,907 tons. In respect to livestock the number of farms reporting domestic animals is 6,963, classified as follows: dairy cows, 49,648; horses, 17,363; swine, 20,757; sheep, 14,294; poultry, 325,621. There were produced 22,384,208 gallons of milk. The total receipts for sale of dairy products was \$2,034,455. Valuation of all farm property is given as \$43,738,499, an increase of 41.3 per cent. since 1900.

The county is thoroughly equipped with lines of transportation. There are 277 district schools in the county besides the graded and high schools in the villages. These are all of the same high standing demanded by the State. Churches of all denominations are scattered throughout the county. There are forty agricultural organizations, thirty-six miles of state road and 1,896 miles of improved highway. The county ranks first in grapes, second in currants, and fourth in poultry.

TOWN OF BUSTI

Population 2,351

No. 77.—Farm of 159 acres; located about 6 miles from Jamestown P. O., R. D. 79, and railway station on line of Erie R. R. and J. C. & L. E. R. R., $\frac{1}{2}$ mile from school, $1\frac{1}{2}$ miles from churches, 3 miles from butter factory, milk wagon passes farm, 8 miles from milk condensing plant. Highways, somewhat hilly. Surface of farm, level and rolling. Altitude, 1,500 ft. Soil, clay loam. Acres in meadow, 40; in natural pasture, 50; in timber, 60, beech, maple and hemlock. Acres tillable, 50. Fruit, an old orchard of 50 apple trees, young pear, cherry and plum trees not yet bearing. Adapted to hay, oats, buckwheat and potatoes. Fences, wire, fair condition. An old farm house with 6 rooms downstairs and 4 upstairs, woodshed attached. Outbuildings, three barns, one 26 x 30 and two 30 x 40. Buildings need repairs. Watered, house by first-class drilled well; fields, by spring and stream. Occupied by owner. Reason for selling, owner cannot attend to farm. Price, \$35 per acre. Terms, \$1,500 cash, payments on balance must be completed in 10 years. Liberal discount for cash. Address Miss Eunice E. Tuttle, owner, Jamestown, N. Y., R. D. 79.

No. 78.—Farm of 152 acres; located $2\frac{1}{2}$ miles from Busti P. O. and 7 miles from railway station at Jamestown on Erie R. R.; 1 mile from school and $2\frac{1}{2}$ miles from churches and butter factory; $3\frac{1}{2}$ miles from condensing plant and milk station. Highways, good somewhat hilly. Nearest city, Jamestown, population 37,780, 7 miles distant. Surface, slightly rolling. Soil, clay loam. Acres in timber, 25, beech, maple and ash. Fruit, 140 apple trees, different varieties, some pears and grapes. Best adapted to hay, grain and potatoes. Fences, wire, good condition. House, 10 rooms. Outbuildings, 3 large barns, new silo and poultry house. Watered, house by well and cistern, barns by well, fields by springs. Occupied by owner. This farm is 4 miles from Chautauqua Lake. Price \$5,500. Address John Morovchick, owner, Jamestown, N. Y., R. D. No. 79.

No. 79.—Farm of 30 acres; located 1 mile from Lakewood on line of Erie R. R.; 1 mile from school, churches and milk station. Highways, good. Nearest city Jamestown, population 37, 790, $5\frac{1}{2}$

miles distant, reached by state road and trolley. General surface, rolling. Nature of soil, clay loam. Acres used as meadow, 15; in natural pasture, 12; tillable, 25. Fruit, a few apple, pear, plum, peach trees, raspberry bushes and grape vines. Best adapted to fruit and grain. Fences, rail and wire, in fair condition. House, 30 x 36. Outbuildings, barn, 40 x 48, hog house, 10 x 12 and poultry house, 12 x 33. Watered, house and barns by well and fields by stream. Occupied by owner. Reason for selling, ill health. Price \$5,000. Terms, \$3,000 cash and remainder on mortgage at 5 % or \$4,800 cash. Address Mrs. Mary Crosby Bliss, Jamestown, N. Y., R. D. 77.

No. 80.—Farm of $106\frac{1}{4}$ acres; located 4 miles from Jamestown on line of Erie R. R.; 1 mile from school and churches. Highways, good. Nearest city, Jamestown, population 37, 780, 4 miles distant, reached by highway. General surface of farm, rolling. Nature of soil, gravel and loam. Acres in meadow, 20; in timber 20; maple; tillable, 80; fruit, 150 apple trees. Best adapted to hay, corn and oats. Fences, wire, in good condition. House, 10 rooms, in good condition. Outbuildings, cow barn, 45 x 48, horse barn, 40 x 26, hay barn, 16 x 24, hog house, 16 x 24 and granary, 12 x 16. Watered, house by well; barns by cistern and fields by springs. Occupied by owner. Reason for selling, old age. Price, \$50 per acre. Terms, $\frac{1}{2}$ down and balance on mortgage. Address J. D. Frank, Jamestown, N. Y., R. D. 80.

TOWN OF CHAUTAUQUA

Population 3,933

No. 81.—Farm of 47 acres; located $\frac{1}{2}$ mile from Mayville P. O.; 1 mile from railway station at Mayville, on line of Penn. R. R.; $\frac{1}{4}$ mile from school; $\frac{1}{2}$ mile from churches; about 3 miles from butter factory; $\frac{1}{2}$ mile from milk station. State road now being built. Electric lights, village water and telephone. Nearest large village, Mayville, population, 1,201, reached by highway or trolley. Surface, rolling; easy grade; can all be worked. Soil, good. Acres in meadow, over 20; in natural pasture, about 20; in timber, about 7, beech and maple. Acres tillable, 30. Fruit, 50 apple trees, 150 grapevines (a good farm for grapes). Best adapted to hay and grain. Fences, wire and rail. House, $1\frac{1}{2}$ stories, 1 story wing; 12 rooms. Six

buildings on farm; horse barn, 22 x 30, in fair condition; cow barn, large enough for 8 head of cattle; poultry house, 1½ stories; hall 24 x 40, 2 stories; building 1½ stories. House watered by pump in kitchen; barns, from house. One mile from Chataqua Lake. Highways on two sides of farm, trolley passes house. Can have natural gas for fuel. Occupied by tenant. Reason for selling, owner has other business. Price, \$4,000. Terms, whole or half cash, balance on mortgage. Name and address of owner, M. F. Jacobsen, 501 East 6th Street, Jamestown, N. Y.

No. 82.— Farm of 133 acres; 2 miles from Hartfield P. O., R. D. 44, and railway station at Hartfield on line of Chautauqua Lake R. R.; ½ mile from school, 2 miles from churches; 1 mile from cheese factory; 2 miles to milk plant (state road). Highways, good, but hilly. Nearest village, Mayville, population, 1,201, distant 4 miles, reached by highways. Surface, pastures hilly, meadows level and rolling. Soil, black loam. Acres in meadow, 45; in natural pasture, about 55; in timber, 30 to 40, beech, maple, ash, basswood and cherry. Acres tillable, about 100. Fruit, a large number of apple trees, choice varieties; a few fine pear trees, few peaches and other fruit. Adapted to hay, corn, oats, etc. Fences, a few rail, the rest wire, in fair condition. House upright, 32x25; wing, 18x50. Outbuildings: barn, 40x50; stable, 40x50; horse barn, 25x30; corn barn, 20x20; all in good condition. Watered, house by well; barns and fields by spring and streams. Chautauqua Lake, 2 miles away. This farm is well watered, lying in a sheltered location with excellent timber and buildings in good condition. Occupied by tenant. Reason for selling, this property is owned and occupied by a widow and her daughter, who cannot conduct farm. Price, \$6,000. Terms, one-half cash, balance on mortgage. Address, M. L. Mallery, owner, Hartfield, N. Y.

No. 83.— Farm of 200 acres; located 2 miles from Hartfield P. O., R. D. and railway station on line of Jamestown and Chautauqua R. R.; 1 mile from school; 2 miles from churches; 2 miles from milk station and condensing plant. Nearest village, Mayville, county seat, population, 1,201, 3 miles distant, reached by rail or highway. General

surface, level, some side hill. Acres in meadow, 150; in pasture, 50; some timber, maple, beech, ash and elm. Acres tillable, 150. Fruit, orchard of 60 trees. Best adapted to corn, oats and potatoes. Fences, wire, good condition. House, poor condition. Outbuildings, large barn, small barn, 2 silos. House, watered by well, fields by brook and springs. View of Chautauqua Lake from house. Occupied by tenant. Possession given at any time. Reason for selling, owner in other business. Price, \$8,000. Terms, \$2,000, balance on easy terms. Address, H. J. Putnam, owner, Fredonia, N. Y.

No. 84.— Farm of 100 acres; located 3½ miles from Mayville P. O.; 1½ miles from railway station at Summerdale, on line of Pennsylvania R. R.; ½ mile from school; 3½ miles from churches and 1½ miles from milk station. Highways, nearly level. General surface, rolling. Nature of soil, clay loam. Acres that can be used as meadow, 60; in natural pasture, 40; in timber, 10, hemlock, white ash, maple and beech. Acres tillable, 75. Fruit, 50 apple trees and 7 acres of grapes. Best adapted to fruit and general farming. Fences, wire, poor condition. 8 room house, poor condition. Outbuildings, barn, 24 x 30, needs some repairs, barn, 30 x 40, needs repairs. Watered, house and barns, by well; fields, by spring and stream. Chautauqua creek, ½ mile distant. Reason for selling, other business. Price, \$3,000. Terms, \$1,500 cash, balance on mortgage at 6 %. Address Andrew Mulholland, owner, Mayville, N. Y., R. D.

No. 85.— Farm of 175 acres; located 2½ miles from Dewittville P. O. and railway station, on line of J. W. & N. W. Electric Line; 1 mile from school; 2½ miles from churches; 1 mile from cheese factory and 3½ miles from milk station. Highways, good. Nearest village, Mayville, population, 1,201, 4 miles distant, reached by rail and highway. General surface, nearly level. Nature of soil, gravel loam. Acres that can be used as meadow, 125; in natural pasture, 20; in timber, 35; acres tillable, 130. Fruit, 50 apple and 3 pear trees. Best adapted to general farming. Fences, wire, good. Eight-room house, good condition. Outbuildings, barn, 30x70, good additions, 18x70, and 18x30; silo, 18x12; tool house, 20x30; all in excellent condition. Watered, house and barns, by wells and fields, by springs and streams. Occupied by owners. Reason for selling, retiring.

Price, \$6,500. Terms, \$2,500 cash, balance on mortgage. Address, Shafer Brothers, owners, Dewittville, N. Y., R. D.

TOWN OF CHERRY CREEK

Population 1,630

No. 86.—Farm of 50 acres; located 1 mile from Cherry Creek, on line of Erie R. R.; 1 mile from school and churches; $1\frac{1}{2}$ miles from cheese factory; $\frac{3}{4}$ mile from milk station and 5 miles from condensing plant. Highways, level. Nearest city, Jamestown, population, 37,780, 20 miles distant, reached by rail. General surface, level. Altitude, 1,200 feet. Nature of soil, clay and muck. Acres that can be used as meadow, all; in natural pasture, 30. Acres tillable, 30. Fruit, a few apple trees. Adapted to hay, corn, cabbage and garden truck. Fences, wire and rail, in good condition. House, 8 rooms, in good condition. Outbuildings, barn, 30x68 and 20 foot posts; leanto 16x38, and poultry house, 10x20. Watered, house and barns, by well; fields, by brook. Reason for selling, ill health. Price, \$10,000. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address, J. W. Pickard, Forestville, N. Y.

TOWN OF FRENCH CREEK

Population 941

No. 87.—Farm of 157 acres; located 5 miles from Clymer P. O., R. D. No. 58; $5\frac{3}{4}$ miles from railway station at Clymer, on line of P. R. R.; 30 rods from school; 1 and $2\frac{1}{2}$ miles from churches; 2 miles from butter and cheese factories and milk station; 5 miles from condensery. Highways, state road. Nearest city, Corry, Pa., population, 8,000, $10\frac{1}{2}$ miles distant, reached by highway. General surface of farm, rolling. Altitude 1,400 feet. Nature of soil, gravelly and clay. Acres that can be used as meadow, 30; in natural pasture, 75; in timber, 40, beech, cherry, maple; much second growth. Acres tillable, 30. Best adapted to corn, hay, potatoes and oats. Fences, wire and rail. House, 26x18, with good cellar. Outbuildings: barns, 45x33, with 16 ft. shed; barn, 70x30, half of this has concrete floor for cows. House watered by well, barns, by spring. French creek flows through farm. Occupied by owner. Price, \$4,500. Terms, \$1,500 cash, balance on installments. Good dairy farm; cows can be turned out earlier and later than farms on the hill. Address, Thomas H. and Mary Dwyer, owners, Clymer, N. Y.

TOWN OF HANOVER

Population 6,465

No. 88.—Farm of 200 acres; located 5 miles from Forestville P. O. and 3 miles from railway station at Smith's Mills, on line of Erie R. R.; $1\frac{1}{16}$ mile from school; $\frac{1}{8}$ mile from churches; $\frac{1}{8}$ mile from cheese factory; 3 miles from milk station, and 6 miles from powdered milk factory. Highways, good. Nearest city, Dunkirk, population 17,870, 14 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,100 feet. Soil, loam. Acres in meadow, 80; in natural pasture, 75; in timber, 45, maple, hemlock and beech; acres tillable, 150. Fruit, 50 apple trees. Adapted to grain of all kinds, hay and grapes. Fences, wire, in good condition. House, 2 stories, 35x35, good condition. Outbuildings, barn, 50x40, with silo and shed; barn, 35x40; barn, 20x30, all in good condition. Watered, house, by well; barns and fields, by springs. This farm is 7 miles from Lake Erie. Occupied by tenant. Reason for selling, to settle an estate. Price, \$60 per acre. Terms, 40% cash, balance on time. Address J. L. Hurlbert, executor, 18 East Second St., Dunkirk, N. Y. Will rent.

No. 89.—Farm of 197 acres; located 3 miles from Forestville P. O., R. D., and railway station, on line of Erie R. R.; $\frac{1}{4}$ mile from school; 3 miles from churches of all denominations; $\frac{1}{4}$ mile from cheese factory; 3 miles from milk station; 6 miles from powdered milk factory. Highways, good. Nearest city, Dunkirk, population 17,870, 11 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,000 feet. Soil, loam. Acres in meadow, 80; in natural pasture, 80; in timber, 35, maple, hemlock and beech. Acres tillable, 160. Fruit, 50 apple trees. Best adapted to grapes, hay and grain. Fences, wire, in good condition. House, 35x30, $1\frac{1}{2}$ stories, in fair condition. Outbuildings, large barn, with silo, 70x40; hay barn, 25x30; cow barn, all in good condition. Watered, house, by well; barns, by running water; fields, by springs. This farm is 7 miles from Lake Erie. Occupied by tenant. Reason for selling, to settle an estate. Price, \$50 per acre. Terms, 40% down, balance on time. Address J. R. Hurlbert, executor, 18 East Second St., Dunkirk, N. Y. Will rent.

NEW YORK STATE SHOULD HAVE 10,000,000 SHEEP.

A DAIRY AND STOCK FARM IN COLUMBIA COUNTY.

TOWN OF POLAND

Population 1,442

No. 90.— Farm of 223½ acres; located 4 miles from Frewsburg P. O., R. D. 84; 3½ miles from railway station at Falconer Junction, on line of Erie & D. A. V. & P. R. Rs.; 80 rods from school; 3 miles from churches; 4 miles from butter factory; 3 miles from milk station; 4 miles from condensing plant. Highways, good. Nearest city, Jamestown, population, 37,780, distant 6 miles, reached by highway and trolley. Surface of farm, meadows and upland. Soil, excellent. Acres in meadow, 100; in natural pasture, 123. Acres tillable, 100. Fruit, 30 trees. Adapted to almost all kinds of crops. Fences, wire and stumps. Houses, 2, in fair condition. Four barns and outbuildings. Watered, house, by pipes from spring; barns, by pipes from springs, and fields, by creek. Conewango Creek runs through meadows. Occupied by tenant. Tenant's lease includes agreement of release in case of sale of farm. Reason for selling, owner living at a distance too great to look after the farm personally. Price, \$10,000. Terms, part cash, balance on mortgage if desired. Terms to be agreed upon. Address A. D. Betts, owner, Downing Avenue, Newburgh, N. Y. Owner will rent with option to buy.

TOWN OF POMFRET

Population 7,535

No. 91.— Farm of 209 acres; located 6 miles from Fredonia; 3 miles from Brocton, on line of L. S. & M. S. R. R.; 1¼ miles from school; 3 miles from churches and milk station; 2 miles from butter factory and cheese factory and 7 miles from condensing plant. Highways, good. Nearest village, Brocton, population, 1,292, 3 miles distant, reached by highway. General surface, rolling. Altitude, 700 feet. Nature of soil, gravel and muck. Acres that can be used as meadow, 50; in natural pasture, 150; in timber, 30, hard wood. Acres tillable, 60. Fruit, 10 pear and 100 apple trees. Best adapted to corn, oats and hay. Fences, wire, in good condition. House, 40x40, in good condition. Barn 100x100. Watered, house by well; barns by springs, and fields by brook. Occupied by owner. Reason for selling, ill-health. Price, \$10,000. Terms: ½ down and balance on mortgage. Address, James Rawson, Fredonia, N. Y.

TOWN OF RIPLEY

Population 2,482

No. 92.— Farm of 87 acres; located 5 miles from Ripley; 4 miles from For-

syth, on line of N. Y. C. R. R. and Lake Shore Trolley; ½ mile from school; 1 mile from churches; milk gathered at door by condensing company. Highways, good. Nearest large vilage, Westfield, population, 3,319, 8½ miles distant. General surface, sloping. Nature of soil, dark loam. Acres that can be used as meadow, 50; in natural pasture, 30; in timber, 10, mostly second growth. Acres tillable, 60. Fruit, about an acre of apple trees. Best adapted to hay, oats, corn and potatoes. Fences, mostly barbed wire. House, 1½ stories. Outbuildings, large barn. Watered, house and barns, by wells; fields, by creek and springs. Occupied by tenant. Reason for selling, old age. Price, \$4,500. Terms, \$4,300 cash or \$1,000 cash and remainder on mortgage. Address, Hermon L. Kent, 72 S. Portage, street, Westfield, N. Y. Owner will rent with option to buy.

No. 93.— Farm of 63 acres; located 3 miles from Ripley on N. Y. C. and N. Y., C., & S. L. R. R.'s; 1½ miles from school and churches. Highways, level and in good condition. Nearest village, Westfield, population, 3,319, 5 miles distant, reached by trolley. General surface, level. Nature of soil, clay loam. Acres in meadow, 15; in natural pasture, 3; tillable, 63. Fruit, 20 acres of apples and 23 acres of grapes. Best adapted to grapes, apples and peaches. Fences, wire, in good condition. House, 9 rooms. Outbuildings, 1 hay barn, 1 horse barn and a tool house. Watered, house and barns, by well, and fields, by stream. Occupied by tenant. Reason for selling, to settle an estate. Price, \$12,600. Terms, ⅓ cash and remainder on mortgage. Address, S. F. Nixon, Westfield, N. Y.

No. 94.— Farm of 150 acres; located 3 miles from Ripley on N. Y. C. & H. R. R. R.: 1½ miles from school and church. Highways, level, part state road. Nearest village, Westfield, population, 3,319, 5 miles distant, reached by trolley. General surface, level. Nature of soil, clay loam. Acres used as meadow, 50; in natural pasture, 10; tillable, 130. Fruit, 50 acres of grapes and some apple trees. Adapted to grapes, other fruit and general farming. Fences, wire and rail. House, 8 rooms, in good condition. Outbuildings, hay barn, horse barn, tool house and poultry house, also 2 gas wells. Watered, house and barns, by well; fields, by streams.

Occupied by owner. Reason for selling, to settle an estate. Price, \$21,750. Terms, part cash and remainder on mortgage. Address, S. F. Nixon, Westfield, N. Y.

TOWN OF SHERMAN

Population 1,732

No. 95.—Farm of 247½ acres; located 1 mile from Sherman P. O. and railway station on line of Penn. Ry.; 1 mile from high school; 1 mile from churches, butter factory and milk station; 1½ miles from condensing plant. Highways, in good condition. Nearest village, Sherman, population 949, reached by highway. General surface of farm, level and sloping. Nature of soil, loam and clay subsoil. Acres in meadow, 40; in pasture, 150; in timber, 57½, basswood, ash, cherry and maple; acres tillable, 150. Fruit, 20 apple, 5 cherry and 2 plum trees. Adapted to corn, hay, oats and potatoes. Fences, wire, in good condition. House, 12 rooms, gas lights, hot and cold water, bath room, in good condition. Outbuildings, barn, 40x150 with basement, concrete floors, swing stanchions, gas lights, large silo. Watered, house by running water; barns, same; fields, by creek. Occupied by tenant. Price, \$20,000. Terms, ⅓ cash 5% mortgage, easy payments. Farming tools, registered bull, 4 horses, and 35 cows go with farm. Address, W. J. Bement, owner, Sherman, N. Y.

TOWN OF WESTFIELD

Population 4,707

No. 96.—Farm of 180 acres; located 5 miles from Sherman P. O.; 4 miles from railway station at Ripley Crossing, on line of Lake Shore and M. S. R. R.; ¼ mile from school; country churches nearby; milk wagon passes farm; 3 to 5 miles from cheese factories. Good soil, very few stones. About ½ of farm tillable, ½ in natural pasture and timber, mostly hardwood. Fruit, part old and part new orchard, variety of trees. Adapted to general farm crops. Fences, mostly barbed wire. Large roomy farm house with two verandas. Outbuildings, barn 40x100 with addition; modern barn with silo; 100 ton hay barn; granary;

basement stables. Watered by well, spring and creek. Concrete milk house with drilled well; drilled well in barn with windmill, also gasoline pumping outfit in milk house. Occupied by tenant. Reason for selling, owner retiring from business. Price, \$6,500. Terms, safe payment down. Address Hermon L. Kent, owner, 72 South Portage Street, Westfield, N. Y.

No. 97.—Fruit farm of 24 acres; located about 1 mile from Westfield P. O. and railway station, on line of Lake Shore and Chicago and St. Louis R. R. and near Chautauqua & Lake Erie R. R. Center of Chautauqua and Erie grape belt. Fine churches and public schools, near Dunkirk, Erie and Buffalo, about 1½ miles from Lake Erie. The land for sale consists of about 16 acres of grapes, 3 acres of meadow, balance pasture. Has large red grape packing house which could be converted into a residence if desired or owner could live in town and work the place. Price, \$4,500. Terms, safe payment down, balance, liberal time if desired. Reason for selling, owner is retiring from business and has several other places. Address Hermon L. Kent, owner, 72 South Portage St., Westfield, N. Y.

No. 98.—Farm of 24 acres; located 1 mile from Westfield, on line of Lake Shore R. R.; ½ mile from Westfield P. O.; 1 mile from school and churches. Surface of farm, level. Soil, gravel and loam. Acres that can be used as meadow, 11; tillable, all. Fruit, 9 acres of grapes, 1½ acres of cherries, large tract of currants, red raspberries, pears, peaches, apples and strawberries. Best adapted to fruit and berries. House, modern, 14 rooms, electric and gas lights, bath, furnace and all conveniences; 3 minutes walk from trolley. Outbuildings, good barn, electric lights, also cow barn, poultry house, etc. Watered, house and barn by city water. Lake Erie, 1 mile distant. Occupied by owner. Reason for selling, wish to retire. Price, \$15,000. Terms, ½ or more cash. Address, A. H. Harris, owner, Westfield, N. Y.

CHEMUNG COUNTY

Area, 513 square miles. Population, 59,017. Annual precipitation, 33.74 inches. Annual mean temperature, 50.9°. Number of farms, 2,193. Average price of farm land per acre, \$33.56. The value of all farm property is \$10,288,587. This is a remarkably low price for good farm land. That the farmers of this county are prosperous is proved by an increase in the value of farm buildings of nearly \$700,000 during the last ten years.

**FIG. 5.—BUILDINGS ON FARM NO. 26, TOWN OF WESTFIELD,
CHAUTAUQUA COUNTY.**



This is a lower tier county bordering on Pennsylvania and is one of the smaller counties of the state.

The surface is uneven and rolling, in some places rising to considerable mountains. The country along the river banks is level and alluvial and those flats are in some places extensive and exceedingly fertile. There is considerable timber on the more mountainous portions of the county. It is well watered by springs, creeks, ponds and the Chemung river. Along the broad valley of this river, tobacco is extensively grown, more being produced than in any other area of the size in the state. There are several streams tributary to the Chemung river whose valleys are now bordered by steep hills with a soil of gravelly loam, intermixed in some places with clay. There are ample markets for all products of the county and the trunk lines of transportation give easy access to inexhaustible markets both in New York and Pennsylvania.

The leading crops are as follows: Corn, 106,999 bushels; oats, 253,138 bushels; buckwheat, 188,079 bushels; potatoes, 370,110 bushels; hay and forage, 51,053 tons; tobacco 2,903,700 pounds. Domestic animals are as follows: dairy cows, 11,035; horses, 5,421; swine, 4,099; sheep, 7,000; poultry, 92,712; total receipts for dairy products, \$521,565; amount of milk produced, 5,539,750 gallons. There are 111 district schools, a college located at Elmira, where is also one of the New York State reformatory institutions and the Erie Railroad car shops which employ a large number of workmen.

TOWN OF BALDWIN

Population 539

No. 99.— Farm of 385 acres; located 10 miles from Elmira; 5 miles from railway station at Erin, on line of Lehigh Valley R. R.; R. D. 2 from Lowman; 1½ miles from school and Baptist church; 1 mile from butter factory; 9 miles from milk condensing plant. Highways, good. Surface of farm, rolling and level. Soil, clay and sub-soil. Acres in meadow, 100; in natural pasture, 200; in timber, 85, hemlock, ash, basswood, maple and beech; acres tillable, 300. Fruit, apples, pears, cherries, plums and peaches. Adapted to oats, barley, buckwheat, potatoes and wheat. Fences, rail, stone and wire, fair condition. House, 28x32; ell, 18x22, 13 rooms, good condition. Outbuildings: cow barn, 50x24; underground stables, 30x40 with shed, 100x16; silo; barn, 26x52 with shed, 80x16; barn, 30x40; sheep barn, 10x24; horse barn, 20x30, with stables, 12x16. Watered, house, by well; barns, by springs and well; fields, by springs. Occupied by owner. Reason for selling, advanced age and ill health of owner. Price, \$6,500. Terms, one-half cash, balance on time. Address Fox or Levi Little, owners, Lowman, N. Y., R. D. 1.

TOWN OF ERIN

Population 840

No. 100.— Farm of 139 acres; located 1 mile from P. O.; ¾ mile from railway station at Swartwood, on line of L. V. R. R.; 1 mile from school and Methodist church; ½ mile from butter

factory; 3½ miles from milk station. Nearest village, Van Etten, population, 407, 4 miles distant; Elmira, population, 40,093, 19 miles distant, reached by rail and highway. Surface, partly hilly. Soil, clay and loam. Fruit, 60 or more apple trees. Adapted to hay, buckwheat, potatoes and dairying. Fences, board, rail and wire, poor condition. 2 barns, 30x40. Watered, barns, by brook; fields, by brook and spring. State road passes through farm. Unoccupied. Reason for selling, death of owner. Price, \$2,500. Terms, part cash. Address, Sophie A. White, owner, 58 Port Watson street, Cortland, N. Y.

TOWN OF HORSEHEADS

Population 6,033

No. 101.— Farm of 200 acres; located 4 miles from Horseheads P. O., R. D. No. 3, and railway station, on line of Erie, D., L. & W.; Penna. & Lehigh R. Rs.; 1½ miles from school; 4 miles from churches, butter factory, cheese factory, milk station and condensing plant. Highways, state road. Nearest city, Elmira, population 40,093, 10 miles distant, reached by rail or highway. General surface, level. Nature of soil, yellow loam and gravel. Acres that can be used as meadow, 150. Acres tillable, 190. Fruit, large apple orchard. Best adapted to rye, oats, buckwheat and hay. Fences, good. Houses, one 12 rooms and one 8 rooms, good condition. Good barns. House, watered by running water, barns by well, fields by springs. Occupied by owner. Reason for selling,

to settle an estate. Price, \$6,000. Terms, cash. Address Lewis Breese, owner, Horseheads, N. Y.

No. 102.—Farm of 65 acres; located 4 miles from Elmira; $1\frac{1}{2}$ miles from Horseheads on line of Erie and D. L. & W. R. R.; $\frac{1}{2}$ mile from school; 1 mile from churches and milk station; 4 miles from butter factory; 6 miles from condensing plant. Highways, state road. Nearest city, Elmira, population, 40,093, 4 miles distant, reached by trolley and highway. General surface, rolling. Nature of soil, gravel and clay loam. Acres that can be used as meadow, 57; in natural pasture, 10; in timber, 8, oak. Acres tillable, 57. Best adapted to potatoes, oats and wheat. Fences, wire. No house or barns. Fields watered by springs. Occupied by owner. Price, \$6,000. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address, John McCann, Elmira, N. Y.

TOWN OF VETERAN

Population 1,470

No. 103.—Farm of 179 acres; located 4 miles from Horseheads P. O., R. D.;

2 miles from railway station at Pine Valley, on line of Pennsylvania R. R.; school adjoins farm; $\frac{1}{2}$ mile from Baptist church, and 4 miles from butter factory. Highways, dirt road, good condition. Nearest large village, Horseheads, population 1,948, 4 miles distant, reached by highway. General surface of farm, rolling. Nature of soil, gravel loam. Acres that can be used as meadow, 100; in natural pasture, 35; in wood, 25. Acres tillable, 125. Fruit, apples, pears, plums and cherries. Best adapted to corn, oats and hay. Fences, woven wire, good condition. House, ample size, good condition, newly roofed. Large barn with cow stables in basement. House and barns watered with running water and fields by springs and streams. Occupied by tenant. Reason for selling, other business. Price, \$10,500. Terms, half cash, balance on mortgage. For \$2,000 more, 30 head of stock and tools can be purchased. Will rent with option to buy. Farm is located on milk route, bell phone, and is 10 miles from Elmira, population 40,093. Address Harvey J. Couch, owner, Odessa, N. Y.

CHENANGO COUNTY

Area, 898 square miles. Population, 36,648. Annual precipitation, 56.23 inches. Annual mean temperature, 47.4°. Number of farms, 4,258. Average price of farm land per acre is \$27.63. With an increase of nearly \$2,000,000 in the value of farm buildings alone there must be prosperity among the farmers and it seems inevitable that land values should show a decided increase during the next two years.

This is one of the interior counties lying southeast of the center of the state.

The surface is elevated and in some places broken and hilly. Two broad and deep valleys traverse the county from north to south. These ridges are subdivided by numerous lateral and some parallel valleys. The summits of these ridges are broad and rolling with an elevation of 300 to 800 feet. There is considerable timber on this upland. Streams, brooks, and springs abound throughout the county and furnish abundant water for villages and farms. Tully limestone and Genesee slate and sandstones are found in the southern part of the county. The sandstone quarries furnish good material for building and flagging. Grindstones and whetstones are quarried near Oxford.

The soil of the county is almost entirely derived from the disintegration of the rocks and is strong and productive. The D., L. & W.; N. Y., O. & W. and D. & H. railroads give ample, cheap and quick transportation of all farm products to the great markets of the state. Dairying is the great industry and the production was 29,919,490 gallons of milk; receipts from the sale of dairy products, \$2,957,886. There are fifty-eight milk stations and factories in this county. The leading crops grown were corn, 177,897 bushels; oats, 440,758 bushels; barley, 4,935 bushels; buckwheat, 75,922 bushels; potatoes, 671,087 bushels; hops, 69,749 pounds; hay and forage, 222,054 tons. The value of all farm property is \$20,912,000, an increase of 19.2 per cent. over that of ten years ago.

Chenango is an excellent fruit county; some of the famous apples originated in this county, notably the Chenango strawberry apple. There are churches of all denominations located in the rural districts, and the 355 district schools, graded and high schools in villages furnish ample educational facilities. There are 1,661 miles of improved highway and 54 miles of state road.

**FIG. 6.—HOUSE ON FARM NO. 87, TOWN OF FRENCH CREEK,
CHAUTAUQUA COUNTY.**

FIG. 7.—HOUSE ON FARM NO. 99, TOWN OF BALDWIN, CHEMUNG COUNTY.



TOWN OF AFTON

Population 1,809

No. 104.— Farm of 151 acres; located $\frac{1}{2}$ miles from Harpursville P. O.; $2\frac{1}{2}$ miles from railway station at Harpursville on D. & H. R. R.; $\frac{1}{2}$ mile from school; $3\frac{1}{2}$ miles from churches and $\frac{1}{2}$ miles from milk station. Highways, good. Nearest city, Binghamton, population 53,668, 23 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, shale and loam. Acres in meadow, 45; in natural pasture, 81; in timber, 25, maple, birch and beech; tillable, 100. Fruit, 90 apple and 10 pear trees. Adapted to corn, oats, wheat, buckwheat and potatoes. Fences, board, wire and rail in fair condition. House, 12 rooms in fair condition. Outbuildings, barn, 30x60, basement barn, 26x36, corn house and granary, 12x16, shed, 12x30, and milk house, 6x8. Watered, house, by well; barns, by spring and fields, by stream. Occupied by tenant. Reason for selling, other business. Price, \$2,800. Terms, \$1,000 cash and remainder on mortgage. Address, H. W. Wedge, Jersey Shore, Pa.

TOWN OF BAINBRIDGE

Population 2,004

No. 105.— Farm of 300 acres; located $1\frac{1}{2}$ miles from Bainbridge P. O.; $1\frac{1}{2}$ miles from railway station at Bainbridge, on line of D. & H. R. R.; 40 rods from school; $1\frac{1}{2}$ miles from churches, butter factory and milk station. Highways, hilly, but good. Nearest city, Binghamton, population 53,668, 22 miles distant, reached by rail and state road. Surface of farm, part level and part rolling. Soil, dark loam. Acres in meadow, 100; in natural pasture, 100; in timber, 40, oak, chestnut and pine. Fruit, 50 apple trees, Adapted to hay, corn, oats, and potatoes. Fences, wire and rail, good condition. Large 2 story house, 20 rooms and porch in good condition. Outbuildings, large basement barn, 60x40, concrete basement; horse barn; hay barn; corn house and milk house. House, watered by spring, barns, by springs, fields, by brooks. Occupied by owner. Reason for selling, old age. Price, \$9,500, without timber. Terms, \$500 cash, balance on mortgage. Address D. J. Baker, owner, Bainbridge.

TOWN OF COLUMBUS

Population 794

No. 106.— Farm of 200 acres, 5 miles from Sherburne P. O. and New Berlin

P. O., R. D. 1, on line of D., L. & W. and O. & W. R. Rs.; $\frac{3}{4}$ mile from school; $1\frac{1}{2}$ miles from churches and milk station; 5 miles from condensery. Highways, good. Nearest city, Norwich, population 8,342, 16 miles distant. Surface, rolling. Soil, gravelly loam, good. Acres in meadow, 50; natural pasture, 125; timber, 25, beech, birch, and maple; acres tillable, 175. Fruit, 50 apple and 10 pear trees. Adapted to dairying, potatoes, corn, oats and buckwheat. Fences, wire, in good condition. House, 30x45, needs some repair. Three barns, one, 30x60, with basement, in good condition; one, 30x40; one, 20x30. Watered, house by well; barns by springs; fields by springs and brooks. Occupied by tenant. Rented for one year with privilege of selling. This farm is on the main road from Sherburne to New Berlin. A first-class dairy farm, very productive. Reason for selling, age and poor health of owner. Price, \$2,500. Terms, \$500 down, balance on bond and mortgage. Address E. C. Bryant, owner, Sherburne, N. Y., R. D. 1.

No. 107.— Farm of 145 acres; located 9 miles from New Berlin P. O., R. D. 3; 3 miles from railway station at Sweets, on line of Unadilla Valley R. R.; $\frac{3}{4}$ mile from school; $2\frac{1}{2}$ miles from Baptist church; 5 miles from butter factory, cheese factory and milk station; 9 miles from condensing plant. Highways, good. Nearest village, New Berlin, population, 1,131, 9 miles distant, reached by highway. Surface of farm, part rolling, part level, part hilly. Altitude, 1,600 feet. Soil, gravel and loam. Acres in meadow, 40; in natural pasture, 60; in timber, 45, basswood, ash, maple and beech; acres tillable, 80. Fruit, 5 acres of apples, 5 kinds of pears. Best adapted to dairying. Fences, stone wall, rail and wire, in good condition. House, 84x24, well painted, slate roof, 2 stories, observatory on top, 20 rooms, large cellar, furnace and a conservatory, in good condition. Barn, 30x40; barn, 20x30; stable, 43x21; shed, 40x20; crib, 12x18; poultry house, 12x24; 2 shops. Watered, house by well; barns, by well, lead pipe to trough; fields, by 3 springs and brook. Occupied by tenant. Reason for selling, to settle an estate. Price, \$3,000. Terms, \$1,500 cash, balance on mortgage. Address F. J. Tuttle, owner, Norwich, N. Y.

No. 108.—Farm of 250 acres; located 8 miles from New Berlin P. O., R. D. No. 4; $3\frac{1}{2}$ miles from railway station at South Edmeston, on line of Unadilla Valley R. R.; $\frac{1}{2}$ mile from school; 2 miles from church; $3\frac{1}{2}$ miles from butter factory; 4 miles from cheese factory; $3\frac{1}{2}$ miles from milk station and 8 miles from condensing plant. Acres that can be used as meadow, 200; in pasture, 70; in timber, 50, ash, beech and maple. Acres tillable, 200. Fruit, apples. Best adapted to dairying, hay and stock farm. Fences, stone wall and wire, good condition. House, 2 stories, 9 rooms, built 7 years ago. Outbuildings, cow barn, 36x100; horse barn, 30x20, stone basement; silo; corn crib and poultry house. House watered by running water; barns, by springs. Occupied by owner. Price, \$5,000. Terms, $\frac{1}{4}$ cash, balance to suit purchaser. Reason for selling, old age. Address Frank Whitten, owner, New Berlin, N. Y., R. D. No. 4. Owner will rent.

TOWN OF COVENTRY

Population 793

No. 109.—Farm of 187 acres; located $\frac{1}{4}$ mile from Coventry P. O., and 5 miles from Coventry railway station, on line of D., L. & W. R. R.; $\frac{1}{4}$ mile from school, churches and milk station. Highways, level and good. Nearest city, Binghamton, population 53,668, 20 miles distant, reached by rail and highway. General surface of farm, slightly rolling. Nature of soil, loam surface, clay subsoil. Acres that can be used as meadow, about 90; in natural pasture, 100; in timber, 17, hardwood, good. Acres tillable, 170. Fruit, 60 apple trees of standard varieties. Adapted to hay, corn, oats, dairying and general farming. Fences, mostly wire, good condition. House, 14 rooms, fair condition. Outbuildings: basement barn, 36x72; wagon house, 40x40; storage barn, 30x40; granary, 12x24, and poultry house, 14x28. House and barns watered by wells, fields, by stream. Occupied by owner. Reason for selling, owner unable to work it. Price, \$20 per acre. Terms, reasonable. Will rent with option to buy. Address E. A. Kark, owner, Coventry, N. Y.

No. 110.—Farm of 280 acres; located 2 miles from Coventry on line of D. & H. R. R.; $\frac{1}{4}$ mile from school and 2 miles from church. Highways, good. 2 miles from milk station. Nearest city,

Binghamton, population 53,668, 18 miles distant, reached by rail or highway. General surface, rolling. Quality of soil, good. Acres in meadow, 80; in natural pasture, 150; in timber, 50, oak, ash, hemlock, pine, maple and beech; tillable, 200. Fruit, 50 apple trees. Best adapted to potatoes, oats, buckwheat and hay. Fences, wire, in good condition. House, 10 rooms, in good condition. Outbuildings, dairy barn, 40x72; horse barn, 30x40; hog house, granary and poultry house. Watered, house and barns, by running water; fields, by stream. Occupied by tenant. Reason for selling, death in family. Price, \$6,500. Terms, $\frac{1}{3}$ cash and remainder on mortgage. Address Mrs. Guy D. Wylie, Afton, N. Y.

TOWN OF GREENE

Population 2,959

No. 111.—Farm of 150 acres; located 5 miles from Greene on line of D., L. & W. R. R.; $\frac{1}{2}$ mile from school; 2 miles from churches, butter factory and cheese factory, and 5 miles from condensing plant. Highways, dirt, level and some hills. Nearest city, Binghamton, population 53,668, 22 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, loam and clay. Acres that can be used as meadow, 100; in natural pasture, 50; in timber, about 35, chestnut, oak, maple, poplar and hemlock. Acres tillable, 120. Fruit, apples. Adapted to oats, potatoes, corn, hay, wheat and buckwheat. Fences, wire, in fair condition. House, 6 rooms, about 26x36. One barn, 26x36, in fair condition; barn, 16x24, in poor condition, and a poultry house. Watered, house by well; barns near spring; fields, by springs and brook. Occupied by owner. Reason for selling, ill health. Price \$1,500. Terms, $\frac{1}{3}$ to $\frac{1}{2}$ cash and remainder on mortgage or \$1,400 cash. Address, F. L. Maine, Willet, N. Y.

TOWN OF GUILFORD

Population 1,963

No. 112.—Farm of 114 acres; 4 miles from Bainbridge P. O. and railway station, on line of D. & H. R. R.; $\frac{1}{2}$ mile from school; 4 miles from 5 churches; R. D. 3 from Bainbridge. Good roads. 3 miles from milk station and 4 miles from condensing plant. Nearest village, Bainbridge, population, 1,201, distant 4 miles, reached by highway. Surface of farm, rolling. Soil, good. Acres in meadow, 40; in natural pasture, 54; in

FIG. 8.—VIEW ON FARM NO. 115, TOWN OF NORWICH, CHENANGO COUNTY.

FIG. 9.—HOUSE ON FARM NO. 109, TOWN OF COVENTRY, CHENANGO COUNTY.



timber, 20, hemlock, pine, chestnut and hard wood; acres tillable, 94. Fruit, 5 plum, 4 pear, 35 apple trees, 2 grapevines, also currants and berries. Adapted to all crops. Fences, wire and rail, in fair condition. House, 20x26, and ell, 18x36, 2 stories, good condition, new. Barn, 24x60, leanto, 14x68, granary, two poultry houses, toolhouse and shop. Watered, house, by running water and 2 wells; barns, by running water; fields, by brook and springs. Reason for selling, wife is dead. Price, \$3,000. Terms, $\frac{1}{2}$ down, balance on mortgage. Address, O. L. Yale, owner, Bainbridge, N. Y., R. D. 3.

TOWN OF MCDONOUGH

Population 825

No. 113.— Farm of 150 acres; located $1\frac{1}{4}$ miles from McDonough; $10\frac{1}{2}$ miles from Oxford on line of D., L. & W. R. R.; $1\frac{1}{2}$ miles from school, churches, butter factory and cheese factory. Highways, state road. Nearest village, Oxford, population 1,594, $10\frac{1}{2}$ miles distant, reached by highway. General surface, rolling. Nature of soil, good. Acres that can be used as meadow, 50; in natural pasture, 100. Acres tillable, 50. Fruit, apple orchard. Best adapted to hay, oats, corn and potatoes. Fences, wire and stone. House, 27x35 with kitchen addition. Outbuildings, basement barn 36x80, 100-ton tile silo, hog house, horse barn, garage and poultry house. Watered, house, by spring; fields by spring and brook. Occupied by owner. Reason for selling, too much land. Price, \$6,000. Terms, \$2,000 cash and balance on mortgage. Address DeVer Lidell, McDonough, N. Y.

TOWN OF NEW BERLIN

Population 2,442

No. 114.— Farm of 150 acres; located $\frac{3}{4}$ mile from New Berlin P. O., R. D. No. 4; 1 mile from railway station at New Berlin, on line of N. Y., O. & W. and Unadilla Valley Rys.; 50 rods from school; 1 mile from churches, creamery and milk station; 2 miles from condensing plant. Nearest city, Norwich, population 8,342, 14 miles distant, reached by rail or highway. State road being constructed. Five acres timber and balance meadow and pasture. Houses, one 3 stories, slate roof, 20x60; the other 24x30, $1\frac{1}{2}$ stories, both in good repair. Barns, 30x60, 26x30 and 30x40, with basements in good condition.

Fences, good. Have sold \$3,300 worth of milk in one year. Occupied by owner and tenant. Price, \$15,000. Terms, $\frac{1}{2}$ cash, balance on time; will make a good investment at price named. Address Crandall Bros., owners, New Berlin, N. Y.

TOWN OF NORWICH

Population 1,201

No. 115.— Farm of 345 acres; located 4 miles from railway station at Rockwells Mills, on line of N. Y., O. & W. R. R.; $\frac{3}{4}$ mile from school; 1 mile from churches; 2 miles from butter and cheese factory. Nearest city, Norwich, population 8,342, 6 miles distant, reached by highway. General surface of farm, 20 acres flat, balance rolling. Acres that can be used as meadow, 325; in natural pasture, 165; in timber, 80, beech and maple, and 200,000 feet of basswood. Best adapted to corn, oats and hay. Apples and other fruit. 12 room house. Cow barn 96x28; wagon house; hop house and hay barns, 50x28, 26x26, 50x28 and 16x14. Watered, by springs. Fences, wire and rail, in fair condition. 2 condensing plants, located convenient to farm, or milk can be shipped to New York. New silo, 14x28. 40 or 45 cows go with farm if desired. Occupied by tenant. Reason for selling, old age. Price, \$22 per acre. Terms, reasonable payment down, balance to suit purchaser. Address S. K. Wood, owner, 27 Hayes Street, Norwich, N. Y.

TOWN OF PHARSALIA

Population 699

No. 116.— Farm of 90 acres; located 2 miles from North Pharsalia P. O., and 9 miles from railway station at Cincinnati, on line of D., L. & W. R. R.; 1 mile from school; 2 miles from churches, butter factory, cheese factory and 14 miles from condensing plant. Highways, good state road part of the way. Nearest city, Norwich, population 8,342, 14 miles distant, reached by highway. General surface, level and sloping. Altitude, 1,700 feet. Nature of soil, loam. Acres that can be used as meadow, 60; in natural pasture, 30; in timber, small grove of maple. Acres tillable, 75. Fruit, pears, apples, plums, cherries and currants. Best adapted to corn, potatoes and small grains. Fences, wall and wire, in good repair. House, 13 rooms, with good roof, newly painted. Outbuildings, good basement barn, good horse barn with concrete floor, and poultry house with concrete floor. Watered,

house by running water, barns by same, fields, by never failing springs. Splendid trout stream runs through farm. Occupied by owner. Reason for selling, old age. Price, \$2,900. Terms, easy, \$900 cash, balance on mortgage at low rate of interest. Address Carlos Atkyns, owner, North Pharsalia, N. Y.; Box 30.

No. 117.— Farm of 122 acres; located $\frac{1}{2}$ mile from North Pharsalia; $12\frac{1}{2}$ miles from Norwich on line of D., L. & W. R. R.; $\frac{1}{2}$ mile from school, church, butter factory and cheese factory; $12\frac{1}{2}$ miles from milk station and condensing plant. Highways, state and dirt roads. Nearest city, Norwich, population 8,342, $12\frac{1}{2}$ miles distant, reached by highway. General surface, rolling. Nature of soil, light loam. Acres in meadow, 30; in natural pasture, 65; in timber, 20, suitable for fire wood; tillable, 35. Fruit, apples and pears. Best adapted to corn, potatoes, oats and buckwheat. Fences, stone and wire, in fair condition. House, small, in fair condition. Outbuildings, basement barn, 32x58. Watered, house, by well; barn, by springs; fields, by spring and creek. Occupied by owner. Reason for selling, other business. Price, \$2,000. Terms, \$900 cash and remainder on mortgage. Address Robert H. Brown, North Pharsalia, N. Y.

TOWN OF PLYMOUTH

Population 959

No. 118.— Farm of 83 acres; located $\frac{1}{2}$ mile from Plymouth; $8\frac{1}{2}$ miles from Norwich on line of D., L. & W. R. R. $\frac{1}{2}$ mile from school, churches, butter factory and cheese factory; $8\frac{1}{2}$ miles from milk station and condensing plant. Highways, state road. Nearest city, Norwich, population 8,342, $8\frac{1}{2}$ miles distant, reached by highway. General surface, rolling. Nature of soil, loam. Acres that can be used as meadow, 60; in natural pasture, 38; in timber, 5, maple. Acres tillable, 60. Fruit, 20 apple and 4 cherry trees. Best adapted to hay, potatoes and oats. Fences, wire, in fair condition. House, 12 rooms. Outbuildings, basement barn 36x60, wagon barn, granary, poultry houses, hog house and 2 milk houses. Watered, house and barns, by running water; fields, by creek. Occupied by owner. Reason for selling, poor health. Price, \$3,500. Terms, $\frac{1}{2}$ cash and remainder

on mortgage. Address Orville S. Benedict, Plymouth, N. Y.

No. 119.— Farm of 103 acres; located $1\frac{1}{4}$ miles from South Plymouth; 2 miles from Galena, on line of O. & W. and D., L. & W. R. Rs.; $1\frac{1}{4}$ miles from school; 2 miles from churches and milk station; $2\frac{1}{2}$ miles from butter factory and cheese factory and 5 miles from condensing plant. Highways, dirt and state road. Nearest city, Norwich, population 8,342, 5 miles distant, reached by highway. General surface, hilly and rolling. Nature of soil, loam. Acres in meadow, 43; in natural pasture, 30; in timber, 30, maple and hemlock. Acres tillable, 43. Fruit, 50 apple and 2 pear trees. Best adapted to hay, oats and corn. Fences, wire, in fair condition. House, 9 rooms. Outbuildings, basement barn, shed, granary, poultry house and milk house. Watered, house by well and fields by creek. Occupied by tenant. Reason for selling, has another farm. Price, \$2,800. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address P. R. Harris, Plymouth, N. Y.

No. 120.— Farm of 213 acres; located 1 mile from Plymouth P. O.; 5 miles from railway station at Smyrna, on line of N. Y., O. & W. R. R.; 9 miles from railway station at Norwich, on line of N. Y., O. & W. and D., L. & W. R. Rs.; $\frac{1}{2}$ mile from school; 1 mile from churches, butter factory and cheese factory; 9 miles from milk station and condensing plant. Highways, good. General surface of farm, rolling. Altitude, 1,300 feet. Nature of soil, loam and some gravel. Acres that can be used as meadow, 75; in natural pasture, 123; in timber, 15; maple and beech. Acres tillable, 70. Fruit, 30 apple trees. Best adapted to hay, corn, potatoes and oats. Fences, wire, good condition. House, double, nearly new, 20 rooms. Outbuildings, 2 good basement barns, good granary, hog pen, corn house, 1 barn, granary and milk house covered with slate roofs. House and barns have running water; fields watered by creek. Occupied by owner. Reason for selling, other business. Price, \$14,000. Terms, half cash, balance on mortgage. A first class dairy farm, concrete floors in barns, buildings protected from lightning. Address E. H. Powell, owner, Plymouth, N. Y. Star Route.

FIG. 10.—VIEW ON FARM NO. 122, TOWN OF ANCREAM, COLUMBIA COUNTY.

FIG. 11.—BUILDINGS ON FARM NO. 123, TOWN OF AUSTERLITZ,
COLUMBIA COUNTY.

CLINTON COUNTY

Area, 1,092 square miles. Population, 47,561. Annual precipitation, 42.47 inches. Annual mean temperature, 46.8°. Number of farms, 3,608. County seat, Plattsburg. This county lies in the northeast corner of the state, bounded on the eastern side by Lake Champlain.

The surface is generally hilly and broken, and in the southern and western parts, mountainous. The county is rich in deposits of magnetic iron ore of the best quality. A part of the central and western portions of the county is covered by the original forests. Along the lake shore the surface is level or moderately uneven. Drift deposits in the northern and eastern parts are abundant, also at bogs.

The soil is a clay and sandy loam and many fine farms are found in this county. The chief rivers of the county are Ausable, Little Sable, Salmon, Saranac, Little Chazy, Great Chazy and the English. Upon all of these rivers and streams are numerous falls furnishing an immense amount of water power. In the western wilderness portion are many famous lakes, the principal of which are the Chateaugay, Chazy, Sampson and Taylor. This section is a great resort for hunters, game and fish being found in abundance. Plattsburg, the county seat, has a population of 10,134, and furnishes a good local market. The United States military post is located at Plattsburg and the Dannemora State Prison is located in the county. There is a large business carried on in lumbering, mining, iron making and for the most part a remarkable showing in agriculture. There are great possibilities for growing in this county along the east lake shore. The principal agricultural products are as follows: corn, 154,628 bushels; oats, 643,439 bushels; barley, 32,853 bushels; buckwheat, 102,933 bushels; potatoes, 1,325,041 bushels; hay and forage, 1,622 tons. The value of all farm property is \$18,116,645, showing a remarkable increase of 50.3 per cent. over the value in 1900. The average value of unimproved land is \$3.40 per acre. Number of dairy cows reported, 25,032; horses, 10,415; pigs, 11,563; sheep, 11,069; poultry, 98,617. The total milk production was 1,550,024 gallons. The receipts from sale of dairy products was \$779,834. The average price of improved farm land, including buildings, \$31.37 per acre. There are 185 district schools, several excellent high schools and a State Normal School located at Plattsburg. Churches of all denominations are located in the villages and country districts. There are thirteen agricultural organizations, namely, one dairy fair association, eleven granges, one Pomona grange. Also 64 miles of state county roads and 947 miles of other improved highways. The D. & H. railroad crosses the eastern boundary of the county and extends through other portions of the county, giving unusual facilities in connection with the water transportation to the lake, for the products that are grown, manufactured or mined in the county.

TOWN OF AUSABLE

Population 1,908

No. 121.— Farm of 135 acres; 1 mile from Arnold Station, on line of D. & H. R. R.; 2 miles from Clintonville P. O.; 1 mile from school; 2 miles from village; 3 miles from butter and cheese factory. Loamy soil, adapted to general farming. Fine scenery. Good trout stream. Nature of soil, sandy loam. Land that can be used as meadow, 40; natural pasture, 50; in timber, 45.

Acres tillable, 40. Watered by springs. Fences, American wire, in good condition. Good orchard. 2 story frame house of 10 rooms, in fine repair, water in bath room and house. Large barn, stable and outbuildings, all in good condition. This would make a good poultry farm. Near a good market. Reason for selling, advanced age of owner. Price, \$3,000, cash or easy terms. Address John Pattinson, owner, Clintonville, N. Y.

COLUMBIA COUNTY

Area, 688 square miles. Population, 44,111. Annual precipitation, 46 inches. Annual mean temperature, 50°. Number of farms, 2,963. County seat, Hudson. Average price of farm land per acre, \$42.60. This is an increase of 31.6 per cent. in 10 years.

This county lies on the east shore of the upper Hudson and extends east to the border of Massachusetts. The Taghkanick Mountains extend along the east border and the adjoining parts of the county are broken by irregular ranges of hills which

constitute the outlying spurs of these mountains. The western portion of the county spreads out in an undulating plateau terminating in the bluffs of the Hudson river. The principal streams are the Jansenkil, Claverack, and Kinderhook creeks. The streams and their tributaries have valuable water powers and prosperous mills are located on them. In the northern portion of the county are numerous lakes and ponds all well stocked with fish. Thermal and mineral springs are found in places; the former, quite celebrated, located at New Lebanon. The various branches of agriculture form the leading industrial pursuits of the people. At the same time there are manufactured to a large extent, paper and cotton fabrics, vegetable extracts and iron. The county is most favorably situated for commerce, as the largest ships can dock at Hudson. The principal crops are: Corn, 410,576 bushels; oats, 503,088 bushels; buckwheat, 81,073 bushels; rye, 230,195 bushels; potatoes, 232,702 bushels; hay and forage, 89,208 tons. Columbia county ranks first in the production of rye and the demand for rye straw in New York city, together with the cheapness of transportation makes this product almost as valuable as the grain itself. The live stock of the county is classified as follows: Dairy cows, 16,133; horses, 9,150; swine, 13,091; sheep, 25,229; poultry, 172,879; production of milk, 7,772,732 gallons. Receipts from sale of dairy products was \$714,274. This county is a choice location for the raising of apples and other orchard fruits.

The soil survey recently made by the United States Government affirms that this county has a soil and climate equal to any portion of the state for orcharding. The New York Railway and electric lines, together with good roads, make ample facilities for shipping products. There are 150 district schools; churches of all denominations are established in the villages and through the rural sections. There are twenty-two agricultural organizations established in the county. The total valuation of farm property is \$19,819,369, an increase of 31.6 per cent. in ten years. The prosperity of the farmers in this county is noted by an increase of nearly \$2,500,000 in the value of farm buildings alone.

TOWN OF ANCARAM

Population 1,110

No. 122.—Farm of 217 acres; located 2 miles from Ancram Village, P. O., R. D. 1, and railway station, on line of Central New England R. R.; $\frac{1}{8}$ mile from school; 2 miles from Protestant churches and milk station. Highways, good. Nearest city, Hudson, population 11,544, 18 miles distant. Surface of farm, rolling and level. Soil, limestone and loam. Acres in meadow, 20; in timber, 19, oak, chestnut and hickory. Acres tillable, 178. Fruit, 500 apple trees, also pears, plums, quinces, cherries and grapes for home use. Best adapted to rye, corn, oats and hay. Fences, stone wall and rail, good condition. House, 18 rooms, 2 fireplaces, good condition. Outbuildings, newly painted grain barn, 40x36; hay barn, 24x100; hay barn, 18x36; carriage house and garage, 20x36, all in good condition. Watered, house, by well and cistern; barns, by running water; fields, by streams. Occupied by owner. Reason for selling, poor health of owner. Price, \$14,000. Terms, \$7,000 down, balance on mortgage. There is a good tenant house on farm. Address Mrs. A. B. Downing, owner, Ancram, N. Y.

TOWN OF AUSTERLITZ

Population 889

No. 123.—Farm of 110 acres; located 1 mile from Chatham P. O. and railway station, on line of B. & A. and N. Y. R. Rs.: 1 mile from school, churches, milk station and butter factory. Highways, state road. Nearest village, Chatham, population 2,389, 1 mile distant. Surface of farm, level and rolling. Altitude, 600 feet. Soil, loam. Acres in meadow, 90; in natural pasture, 10; in timber, 10, oak, pine, etc. Fruit, 100 apple trees. Adapted to any crop grown in this climate. Fences, wire and board, good condition. House, 14 rooms, good condition. Large hay and grain barn, hay press in barn, good condition. Watered, house and barns, by running water; fields, by brook and spring. Electric power now available; stationary tubs and sink in kitchen, also 100-gallon hot water boiler. Occupied by owner. Reason for selling, ill health and advanced age of owner. Price, \$8,500. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address S. N. Loomis, owner, Chatham, N. Y.

No. 124.—Farm of 170 acres; located $4\frac{1}{2}$ miles from railway station at Ghent, on line of B. & A. and N. Y. C. R. R.



FIG. 12.—VIEW ON FARM NO. 124, TOWN OF AUSTERLITZ, COLUMBIA COUNTY.

FIG. 13.—HOUSE ON FARM NO. 124, TOWN OF AUSTERLITZ, COLUMBIA COUNTY.



Highways, somewhat hilly, but good. This farm is $1\frac{1}{4}$ miles from school; $2\frac{1}{2}$ miles from Protestant churches, butter factory and cheese factory; 5 miles from milk shipping station. Nearest large village, Chatham, population 2,389, 6 miles distant, reached by rail and highway. Acres in natural pasture, 50; in meadow, 70; in timber, 20, chestnut, oak, maple, etc. Acres tillable, 130. Occupied by present owner 25 years. Fruit, 100 apple, 15 pear, 15 cherry, 65 plum trees and 10 grape vines. Fences, mostly wire; some stone and rail. Large 14 room house, main part 25x40, wing 18x25. Outbuildings, main barn, 45x60, stanchions for 18 cows, stalls for 6 horses; wagon house, 26x32; poultry house, 15x20; hog pen and corn house, 12x24; wood house, 15x20; shop, 10x12; new tool house, 14x35; all in good condition. Daily mail at door. Watered by two wells and several springs. Adapted to dairying, poultry, fruit raising or general farming. Soil, clay subsoil, no gravel or swampy land. Altitude, 900 feet. Reason for selling, unable to care for farm. Price, \$4,750. Terms, $\frac{1}{2}$ cash, balance on mortgage at 5 per cent. Address John Freehan, owner, Ghent, N. Y.

No. 125.— Farm of 20 acres; located $3\frac{1}{2}$ miles from Chatham P. O. and railway station; 1 mile from school and churches. State road within $\frac{1}{4}$ mile of farm. Nearest city, Albany, population, 107,979, 24 miles distant. Surface of farm, rolling. Altitude, 800 feet. Soil, clay loam. All tillable. Fruit, 1,200 apple trees. Best adapted to fruit. House, 24x30, 6 rooms, fair condition. Watered by well. Occupied by owner. Reason for selling, owner in other business. Price, \$4,500. Terms, 60% cash. Address T. F. Niles, owner, Chatham, N. Y. Will rent, with option to buy.

TOWN OF CANAAN

Population 1,057

No. 126.— Farm of 130 acres; located 2 miles from Canaan on line of B. & A. R. R.; $\frac{1}{4}$ mile from school; $\frac{1}{8}$ mile from church; $2\frac{1}{2}$ miles from milk station. Highways, good. Nearest village, Chatham, population 2,389, 9 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 50; in natural pasture, 35; in timber, 25; chestnut and common wood. Acres tillable, 90. Fruit, some apple trees. Best adapted

to rye and other grains. Fences, good. House, new, 15 rooms. Outbuildings, barn 50x40. Watered, house, by spring; barns and fields, by creek. Occupied by owner. Reason for selling, old age. Price, \$2,800. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address Ciro E. Cadalso, Canaan, N. Y.

No. 127.— Farm of 305 acres; located 5 miles from East Chatham, $1\frac{1}{4}$ miles from Edwards Park on line of B. & A. R. R.; $1\frac{1}{4}$ miles from school; 2 miles from churches and 5 miles from cheese factory. Highways, good. Nearest village, Chatham, population 2,389, 9 miles distant, reached by rail and highway. General surface, level and rolling. Nature of soil, loam. Acres in meadow, 75; in natural pasture, 80; in timber, 150, pine, chestnut, oak and maple. Acres tillable, 100. Fruit, varieties of apple, pear and plum trees. Best adapted to corn, rye, oats and potatoes. Fences, wood and wire, in good condition. House, 11 rooms, in good condition. Outbuildings, hay barn, dairy barn, horse barn, hog house, poultry house, ice house, creamery and wood house. Watered, house, by spring; barns, by spring; fields, by spring and brook. Occupied by tenant. Reason for selling, to close an estate. Price, \$6,500. Terms, 60 per cent. cash and remainder on mortgage. Address Rev. J. Perry Beaver, Coeymans, N. Y.

No. 128.— Farm of 95 acres; located 1 mile from East Chatham P. O., R. D. No. 1, and railway station on line of B. & A. R. R.; 1 mile from school, churches and cheese factory and 4 miles from milk station. Highways, good. Nearest village, Chatham, population 2,389, 6 miles distant, reached by rail and highway. General surface of farm, rolling. Altitude, 600 feet. Nature of soil, good. Acres that can be used as meadow, 80; in natural pasture, 5; in timber, 10, oak, hickory, hemlock, pine, good quality. Acres tillable, 80. Fruit, 65 apple, 4 cherry, 3 peach and 6 pear trees. Adapted to hay, corn, oats, buckwheat, rye and potatoes. Fences, mostly woven wire, good condition. House, 14 rooms, good condition. Outbuildings, basement barn 72x35, poultry house 24x12, wood house 16x20, garage 12x20, all in good condition. Watered, house by well and spring, barns by well and brook and fields by brooks. Occupied by owner. Reason for selling,

wishes to retire. Price, \$7,500. Terms, \$5,000 cash, balance on mortgage. Will sell stock and tools with farm if desired. Address Edgar H. Coburn, owner, East Chatham, N. Y., R. D. No. 1.

No. 129.—Farm of 95 acres; located 1 mile from East Chatham, on line of B. & A. R. R.; 1 mile from school, churches and cheese factory and 4 miles from milk station. Nearest village, Chatham, population 2,389, 6 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, good. Acres in meadow, 80; in natural pasture, 5; in timber, 10, oak, hemlock, hickory and pine. Acres tillable, 80. Fruit, 65 apple, 4 cherry, 3 peach and 6 pear trees. Adapted to hay, corn, oats, buckwheat, rye, and potatoes. Fences, mostly woven wire, in good condition. House, 14 rooms, in good condition. Outbuildings, basement barn 72x35, poultry house 24x12, wood house 16x20, and garage 12x20. Watered, house by well and spring, barns by well and brook, fields by brooks. Occupied by owner. Reason for selling, wishes to retire. Price and terms given on application. Address Edgar H. Coburn, owner East Chatham, N. Y.

TOWN OF CHATHAM

Population 3,301

No. 130.—Farm of 147 acres; located 2 miles from North Chatham; 2 miles from Chatham Center, on line of B. & A. R. R.; $\frac{1}{4}$ mile from school; 2 miles from churches and 6 miles from condensing plant. Highways, good. Nearest city, Albany, population 107,979, 14 miles distant, reached by rail and trolley. General surface, level and rolling. Nature of soil, loam. Acres that can be used as meadow, 110; in natural pasture, 7, and in timber, 24, chestnut, oak and maple. Acres tillable, 116. Fruit, apples, pears, peaches, plums, cherries and grapes. Best adapted to hay, rye and corn. Fences, rail and wire, in fair condition. Houses, main house, 15 rooms and tenant house, 8 rooms. Outbuildings, basement barn 40x60; wagon house 36x24; ice house 12x14; hog barn and corn house 24x30. Watered, house, by well and cistern; barns, by well, and fields, by springs. Occupied by owner. Reason for selling, to settle an estate. Price, \$6,500. Terms, cash. Address F. J. Thompson, Chatham Center, N. Y.

No. 131.—Farm of 66 acres; located $\frac{1}{4}$ mile from Malden Bridge; 4 miles from Chatham Center, on line of B. & A. R. R.; $\frac{1}{8}$ mile from school; $\frac{1}{2}$ mile from churches, and 2 miles from milk station. Highways, good dirt road. Nearest village, Chatham, population 2,389, 8 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, limestone and gravelly. Acres used as meadow, 66. Acres tillable, 66. Fruit, 28 plum, 15 pear, 4 peach, 20 cherry and 24 apple trees. Adapted to hay, oats, rye, corn and potatoes. Fences, wire and rail, in good condition. House, 11 rooms, in good condition. Outbuildings, basement barn 30x50, wagon house 18x20, corn house and hog house. Watered, house, by well and cistern; barn, by running water, and fields by creek and spring. Occupied by owner. Reason for selling, wishes to retire. Price, \$3,800. Terms, cash. Address Mrs. Verna B. Drowne, Malden Bridge, N. Y.

No. 132.—Farm of 100 acres; located $1\frac{1}{2}$ miles from East Chatham P. O., R. D., and railway station, on line of B. & A. R. R.; $\frac{1}{4}$ mile from school; $\frac{1}{2}$ mile from churches; $1\frac{1}{2}$ miles from cheese factory and 4 miles from milk station. Highways, good; $\frac{1}{2}$ mile from proposed state road. Nearest village, Chatham, population 2,389, 4 miles distant. General surface, level to rolling. Altitude, 550 feet. Acres that can be used as meadow, 70, in natural pasture, 5, in timber, 25, mostly heavy pine, chestnut and oak. Acres tillable, 70. Fruit, an abundance of apples, pears, plums, peaches, cherries, currants and strawberries. Adapted to hay, rye, oats, corn, potatoes and garden truck. Fences, rail, board and woven wire, in good condition. House, 20 rooms arranged for 2 families, in first class condition. Outbuildings: barn 30x44, 18-foot posts; shed 20x52, 12-foot posts; wagon house 20x30, 12-foot posts; corn crib and shop 20x30, 12-foot posts; hog house and 2 poultry houses. House watered by never-failing well, barns by well, fields by spring and stream. Occupied by owner. Reason for selling, wish to retire. Price, \$9,000. Address E. J. Colbert, owner, East Chatham, N. Y.

No. 133.—Farm of 114 acres; located 4 miles from Chatham P. O., R. D. No. 1 and railway station and $2\frac{1}{2}$ miles from East Chatham, on line of B. & A. R. R.;

FIG. 14.— VIEW ON FARM NO. 128, TOWN OF CANAAN, COLUMBIA COUNTY.

**FIG. 15.— MILL AND DAM ON FARM NO. 135, TOWN OF CHATHAM,
COLUMBIA COUNTY.**



1 mile from school; $1\frac{1}{4}$ miles from churches; $2\frac{1}{2}$ miles from cheese factory and 4 miles from milk station. Highways, good. Nearest village, Chatham, population 2,389, 4 miles distant. General surface, rolling. Altitude, 600 feet. Acres that can be used as meadow, 99; in natural pasture, 76; in timber, 14, oak, maple, chestnut, hickory and pine. Acres tillable, 99. Fruit, 45 apple trees. Adapted to hay, rye, oats, corn and buckwheat. Fences, board, rail and woven wire, in good condition. No house. Outbuildings: Barn 30x45, 18-foot posts; 7-foot basement, wagon house and shed 20x30, 12-foot posts; 7-foot basement in good condition. Barns and fields watered by springs. Occupied by owner since 1877. Reason for selling, wish to retire. Price, \$8,000. Address E. J. Colbert, owner, East Chatham, N. Y.

No. 134.— Farm of 56 acres; located $\frac{1}{2}$ mile from East Chatham railroad station, on line of B. & A. and Harlem Division of the N. Y. C. R. Rs.; $\frac{1}{2}$ mile from school, churches, cheese factory and milk station. Highways, excellent. General surface of farm, rolling. Nature of soil, sandy loam. Acres in timber 7, oak, birch and maple. Fruit, about 100 pear and 20 apple trees. All but the woodland in fruit. Adapted to rye, oats, onions and potatoes. Fences, wire. House, 16 rooms, 2 cellars, running water, gas, modern improvements. Barns, nearly new. Watered, house and barns by spring, fields by springs and streams. Occupied by owner. Reason for selling, old age. Price, \$6,000; $\frac{1}{2}$ cash, balance on mortgage. Address Dr. J. J. Ashley, owner, East Chatham, N. Y. Will rent.

No. 135.— Farm of 44 acres; located $1\frac{1}{2}$ miles from Chatham Center P. O.; 2 miles from railway station, on line of B. & A. R. R.; $1\frac{1}{2}$ miles from school and church and 3 miles from milk station. Highways, good state road. Nearest village, Chatham, population 2,389, $5\frac{1}{2}$ miles distant, reached by rail and highway. General surface, rolling. Nature of soil, gravel loam. Acres that can be used as meadow 37, in natural pasture, 7. Acres tillable, 37. Fruit, 50 apple trees, cherries, plums and small fruits. Best adapted to hay, potatoes and grain. Fences, wire, good condition. House, 8 rooms, frame, in good condition. Out-

buildings, large barn and shed, ice house, poultry house and smoke house. Kinderhook Creek runs through farm. Occupied by owner. Reason for selling, other business. Price, \$8,000. Terms, \$4,000 cash, balance on mortgage. Water power flour and feed mill with farm. Address Mrs. Helen C. Van Alstyne, owner, Chatham Center, N. Y. Will rent.

No. 136.— Farm of 290 acres; $1\frac{1}{4}$ miles from Old Chatham on line of Rutland R. R.; $\frac{3}{8}$ mile from school; 2 miles from churches, and $1\frac{1}{2}$ miles from milk station. Highways, good. Nearest city, Albany, population 107,979, 17 miles distant, reached by rail, trolley or highway. General surface, 100 acres level and 190 rolling. Nature of soil, loam. Acres used as meadow, 200; in natural pasture, 55; in timber, 20, chestnut, hemlock and maple. Acres tillable, 250. Fruit, 25 acres of apples. Adapted to oats, corn, rye, hay and potatoes. Fences, rail, stone and woven wire, in fair condition. Houses, 4, in excellent condition with the following dimensions: 2-story, 40x40; 2-story, 20x24, with ell, 18x20; 2 1-story houses, 30x36. Outbuildings, horse stable, cow stable, silo and hay and grain barn. Watered, house, by wells and cistern; barns, by running water; fields, by brooks and springs. Occupied by owner. Price, \$23,000. Terms, part cash and remainder on mortgage. Address Hugh Van Alstyne, Old Chatham, N. Y.

No. 137.— Farm of 136 acres; located $1\frac{1}{4}$ miles from East Chatham, on line of B. & A. R. R.; $1\frac{1}{4}$ miles from school, churches and cheese factory; 5 miles from milk station. Highways, good. Nearest village, Chatham, population 2,389, 4 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, loam. Acres in meadow, 110; in natural pasture, 12; in timber, 5, oak and pine. Acres tillable, 110. Fruit, 160 apple and 50 plum trees. A few pear, cherry and quince trees and grape vines. Adapted to hay, corn, oats, buckwheat and potatoes. Fences, wire, in good condition. House, large and nearly new. Outbuildings, large barn, wagon house, hog house, poultry house and shed. Watered, house and barns, by well; fields, by springs and creek. Occupied by owner. Reason for selling, other business. Price, \$8,000. Terms,

$\frac{1}{2}$ cash and remainder on mortgage. Address Eugenie M. Doyle, Chatham, N. Y.

TOWN OF CLERMONT

Population 881

No. 138.— Farm of 210 acres; located 1 mile from Clermont P. O.; 6 miles from railway station at Germantown, on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches; 5 miles from butter factory, and 4 miles from milk station. Highways, good. Nearest city, Hudson, population 11,544, 14 miles distant, reached by auto bus. Surface of farm, level. Altitude, 125 feet. Soil, gravelly loam. Acres in meadow, 100; in natural pasture, 10; in timber, 10, oak, locust and chestnut. Acres tillable, 190. Fruit, 250 bearing Baldwins, 300 trees 5 years old of standard varieties, and 10 pear trees. Best adapted to fruit, hay, dairying and grain. Fences, mostly wire, good condition. House, $24\frac{1}{2} \times 47\frac{1}{2}$, 3 stories, brick, 14 rooms, 5 open fireplaces, piazza $10 \times 28\frac{1}{2}$, colonial, with 2-story frame wing $30\frac{1}{2} \times 38\frac{1}{2}$, in good condition. Outbuildings, barns, 29×55 , 34×54 , $51\frac{1}{2} \times 40\frac{1}{2}$, wagon house and stable combined 30×50 , shed 16×4 , corn house, ice house and hog house. Watered, house, by well, barns by well and creeks, fields by creeks. Hudson River, 5 miles distant from farm. Occupied by owner. Reason for selling, old age. Price, \$11,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Also good tenant house, with barn, on farm. Rates of shipment of farm produce to New York City are low. Address Harold Wilson, owner, Clermont, N. Y.

TOWN OF COPAKE

Population 1,368

No. 139.— Farm of 200 acres; located $2\frac{1}{2}$ miles from Hillsdale P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R. (Harlem Division); $2\frac{1}{2}$ miles from school, churches, butter and cheese factory and milk station. Highways, good. General surface, rolling. Altitude, 1,200 feet. Acres in meadow, 40; in pasture, 60; in timber, 100, all varieties. Acres tillable, 55. Fruit for home use. Best adapted to corn, potatoes and rye. House, 35×25 , in good condition. Barn, 30×40 , with wing, good condition. House watered by well, barn and fields by springs and stream. Occupied by tenant. Price,

\$2,000. Terms, easy. Address, W. A. Mallery, owner, Hillsdale, N. Y. Will rent.

TOWN OF GALLATIN

Population 780

No. 140.— Farm of 260 acres; located 2 miles from Jackson Corners P. O., R. D.; 2 miles from Mount Ross railway station, on line of C. N. E. R. R.; 1 mile from school and church; 6 miles from milk station; good roads. Soil, slate and loam. Acres in meadow, 125; in natural pasture, 100; in timber, 35, mostly oak and chestnut. Acres tillable, 225. Fruit, 200 trees, plums, peaches, apples and pears. Adapted to corn, oats, rye, hay and potatoes. Fences, stone and rail, fair condition. Two good houses; 1, 22×32 , good condition; barn, 32×80 , good condition. Watered, house, by well; barn, by spring and stream. Reason for selling, owner wishes to give up farming. Price, \$3,500. Terms, \$2,000 cash, balance on bond and mortgage at 5 per cent. Address Henry C. Near, owner, Jackson Corners, N. Y.

TOWN OF GHENT

Population 3,118

No. 141.— Farm of 200 acres; located 1 mile from Stockport P. O. and railway station, on line of A. S. R. R.; 1 mile from school and church; $3\frac{1}{2}$ miles from butter factory, cheese factory and milk station. Highways, somewhat hilly. Nearest city, Hudson, population 11,544, 7 miles distant, reached by rail and highway. Surface of farm, rolling. Soil, clay loam. Acres in meadow, 100; in natural pasture, 6; in timber, 12, pine and oak. Acres tillable, 150. Fruit, 75 apple and 25 pear trees. Best adapted to hay, corn and oats. Fences, mostly woven wire, fair condition. House, 25×40 , stone, fair condition; tenant house in good condition. Outbuildings, new barn, 40×52 ; new hog pen and cow shed; also wood house, wagon house and corn house, in good condition. Watered, by spring and cistern; fields by creek and springs. Occupied by tenant. Reason for selling, old age. Price, \$8,000. Terms, \$3,000 cash, balance on mortgage. Address Mrs. Alvin Moore, owner, Ghent, N. Y. Will rent.

No. 142.— Farm of 270 acres; located 2 miles from Philmont P. O., R. D. 2, and railway station, on line of Harlem

FIG. 16.—VIEW ON FARM NO. 132. TOWN OF CHATHAM, COLUMBIA COUNTY.



R. R.; 1 mile from school; 2 miles from churches and cheese factory; 3 miles from milk station. Highways, state road. Nearest city, Hudson, population 11,544, 11 miles distant. Surface of farm, some level and some rolling. Soil, 100 acres loam, balance of tillable slate land. Acres that can be used as meadow, 120; in natural pasture, 25; in timber, 100, oak and maple. Acres tillable, 150. Fruit, pears, cherries and apples. Adapted to general farming. Fences, stone, rail and wire, fair condition. House, 40x42, with 8 rooms, good condition. Outbuildings, barn, 32x53; wagon house, 24x22; basement barn and wagon house, nearly new; milk, poultry and hog houses. Watered by running water. Occupied by tenant. Reason for selling, too large a farm. Price, \$5,250. Terms, \$1,500 cash, balance on mortgage. Address Robert Haag, owner, Philmont, N. Y.

No. 143.— Farm of 150 acres; located 2 miles from Chatham P. O. and railway station, on line of B. & A. R. R.; 2 miles from school; 2 miles from churches and milk station. Highways, good and level. Nearest village, Chatham, population 2,389, 2 miles distant, reached by highway. General surface of farm, 100 acres, level, balance rolling. Nature of soil, gravelly and sandy. Acres that can be used as meadow, 30, in natural pasture, 20, in timber, 20, oak, pine, maple, etc., Acres tillable, 130. Fruit, 25 apple and 10 pear trees. Best adapted to rye, oats and corn. Fences, wire, in good condition. House, 1½ stories, 12 rooms in good condition. Outbuildings, 1 good, large barn, large shed, wagon house, corn house and sheep house. House watered by well; barns, by cistern; and fields, by brooks. Occupied by owners. Reason for selling, advanced age of owners. Price, \$5,500. Terms, half cash, balance on mortgage. Address Susan and Julia Shufelt, owners, Chatham, N. Y.

No. 144.— Farm of 216 acres; located 2 miles from Ghent and Chatham, on line of N. Y. C., B. & A., H. & C. and Rutland R. Rs.; 2 miles from school; 2 miles from churches; 3 miles from milk station. Nearest large village, Chatham, population 2,389; also 12 miles from city of Hudson, population, 11,544. Highways, good. Surface, some level, some rolling and some hilly. Soil, rich black and gravelly loam. Acres tillable, 200; balance, mostly wooded, some

good oak and pine timber. Fruit, about 300 fruit trees of all kinds. Best Adapted to rye, oats, corn, potatoes and hay. Fences, mostly woven wire, some board and stone wall, in good condition. Large colonial house, 20 rooms, 3 halls, 2 cellars, separate apartments for owner and farmer, in excellent condition. Fine, large, shade trees. Outbuildings: main barn, side hill, 58x40; carriage house and horse stable, 72x24; cow stable, 60x22; sheep stable, 28x24; poultry and tool house, 23x14; corn house and workshop, 24x22; garage, 20x17; hog house, 20x15; ice house, 15x15; smoke house, 11x9; wood house, 22x14; all in fine condition. Tenant house, 5 rooms and cellar. Watered by running water in barns, 3 wells, 3 streams, and 2 cisterns. Have dam built across one small stream forming a nice ice pond. R. F. D. and telephone. Electric current available. This property is 4 miles from the Hudson River. Well adapted for stock or dairy farm. Reason for selling, owner engaged in other business. Price, \$21,600, including \$3,000 personal property. Address Elbert Miller, owner, 314 W. 112th street, New York City.

No. 145.— Farm of 212 acres; located 1½ miles from Ghent P. O., R. D. 2; and railway station on line of Harlem R. R. and Hudson branch of B. & A. R. R.; 2 miles from school; 1½ miles from churches; 3 miles from milk station. State road under construction. Nearest village, Chatham, population, 2,389, 4 miles distant, reached by rail and good highway. Surface, part hilly and part level. Soil, gravelly loam and slate; 90 acres that can be used as meadow; 50 acres of natural pasture; 15 acres of timber, mostly second growth, including 5 acres of pine. Acres tillable, 150. About 100 bearing apple trees and several plum, peach and pear trees. Fences, mostly woven wire, some stone wall. There are two complete sets of buildings, near enough for convenience. The two houses are 1½ stories; one has 12, the other 7 rooms; in fair condition. One 2-story barn and plenty of other barns and buildings for convenience and comfort, all in good condition, mostly newly roofed. House has water piped from spring; barns piped from spring; fields have several springs. The Catskill Mountains, about 10 miles distant, are in full view from any part of farm; the Hudson river

about same distance. This farm is one of the best watered in this section; water from never-failing spring is piped to the house, barn yard and poultry yard. Telephone in house, and R. D. passes door. The farm is practically divided by the Harlem R. R. One set of buildings each side. It is particularly adapted to stock, especially sheep. Occupied by owner since 1880. Reason for selling, owner's desire to retire. Price, \$9,000. Terms, one-half cash, balance mortgage, 5%, term of years. Address Delmer Kisselburgh, owner, Ghent, N. Y.

No. 146.—Farm of 175 to 267½ acres as desired; located 2 miles from Mellenville P. O.; 267½-acre farm includes vein of brown hematite iron ore; ¼ mile from railway station at Pulver Station, on line of Hudson & Chatham branch of B. & A. R. R.; ½ mile from school; 2 miles from churches; 2 miles from milk station. Nearest large village, Philmont, population, 2,060. Highways, good. Surface, mostly level, some rolling. Soil, rich black and gravelly loam. Nearly all of the land tillable. Fruit enough for family use. Best adapted to rye, oats, hay, corn and potatoes. Fences, woven wire, board and wall. Extra fine house, 12 large rooms, 2 large halls, colonial style. Outbuildings: large side hill barn, 68x40, gambrel roof, just being completed to replace barn burned; cow stables and carriage house, 32x13, attached; cow barn, hog house, corn house, carriage and wood house, in fair condition. Watered by well and never failing spring. This property is about 8 miles from the Hudson river. Products can be shipped at Pulvers Station, practically on the farm. This is a high class farm, desirable for dairy or stock farm. Reason for selling, owner has other business. R. F. D. and telephone lines. Electric current available. For price and terms, address Elbert Miller, owner, 314 W. 112th street, New York City.

TOWN OF HILLSDALE

Population 1,313

No. 147.—Farm of 140 acres; 5 miles from Hillsdale P. O. and railway station, on Harlem Division of N. Y. C. R. R.; ½ mile from school; 2½ miles from churches; 2½ miles from cheese factory and milk station; R. D. and telephone connections. Highways, good and level. Nearest city, Hudson, population 11,544,

16 miles distant, reached by rail and highway. Occupied by owner. Surface of farm, rolling. Soil, slate loam. Acres in meadow, 30 to 40; timber, 35, oak and chestnut. Acres tillable, 100. Fruit, apples, plums, grapes, pears and peaches, fine varieties. Adapted to hay, potatoes and all kinds of grain. Fences, rail and wall. House, 48x30, in good condition. Outbuildings, all in good condition; 1,000 feet above sea level; the best of air and finest spring water. An ideal summer residence. Price, \$3,000. Terms, easy. Address Judson Wiley, owner, Hillsdale, N. Y.

No. 148.—Farm of 173 acres; located 1½ miles from Hillsdale P. O.; 1½ miles from railway station, on line of N. Y. C. R. R.; 1½ miles from school, churches, butter factory and milk station. Highways, good. Nearest large village, Great Barrington, Mass., population 5,000. Surface, rolling. Soil, loam and limestone. Acres tillable, 158; 20 acres of chestnut, pine and oak timber. Fruit, 100 apple trees, pears and plums. Adapted to rye, corn, oats, potatoes and hay. Fences, wall, rail and some wire, in good condition. House, 40x45, in excellent condition. Outbuildings: 2 barns, one 86x40 and other 24x40; large wagon house and sheds; tenant house 24x40. Watered by well, springs and streams. Occupied by tenant. Reason for selling, owner has other business. Price, \$10,000. Terms, easy. Address W. A. Mallery, Jr., owner, Hillsdale, N. Y.

TOWN OF KINDERHOOK.

Population 3,346

No. 149.—Farm of 125 acres; located 1½ miles from Kinderhook P. O. and railway station, on line of A. S. R. R.; 1½ miles from school and churches; 3 miles from butter factory; 1½ miles from milk station. Highways good. Nearest city, Hudson, population 11,544, 14 miles distant, reached by rail or highway. Surface, mostly level, some rolling. Soil, sandy loam. Acres in meadow, 20; in natural pasture, 10; in timber, 5, hardwood, oak, ash, locust for posts. Acres tillable, 100. Fruit, 400 apple trees in full bearing, cherries, pears and grapes; young orchard of 500 trees, beginning to bear. Adapted to potatoes, corn, oats, and rye. Fences, mostly wire, in good condition. House, 30x40, with wing, 15x15, in good

FIG. 17.— HOUSE ON FARM NO. 138, TOWN OF CLERMONT, COLUMBIA COUNTY.

FIG. 18.— HOUSE ON FARM NO. 139, TOWN OF COPAKE, COLUMBIA COUNTY.



condition; water, bath and telephone; tenant house, 24x30; 2 barns, 30x40; stable and wagon house, 40x20; shed and cow stable, 30x50; corn house, new 75-ton silo, and wagon house, 20x24. Watered, house by well and cistern; barns, by wells; fields, by springs and running stream. Occupied by owner. Reason for selling, wishes to retire. Price and terms on application. Address A. M. Snyder, owner, Valatie, N. Y., R. D.

No. 150.— Farm of 200 acres; situated within the incorporated village of Kinderhook, population 827. Fertile, productive soil. Albany Southern Railway Station about $\frac{3}{4}$ mile from farm, hourly train service. Churches, high school, grange and stores within easy walking distance. State road. Village has 5 miles of concrete sidewalks and streets are lighted by electricity. Farm contains about $\frac{1}{2}$ bottom land or creek flats, which produce large crops of corn, hay, grain, etc. Wood enough for home use. Good pasture. Kinderhook Creek flows through the farm. Abundance of springs, giving unlimited water supply. Trout pond and springs from which water is supplied by hydraulic ram to house and barns. 250 young apple trees just in bearing; 750 young apple trees planted recently; 500 pear trees in bearing; other fruit for home use. House, 13 rooms, 200 years old; bath and heat, excellent repair. Nine-room cottage for farm help. Ample barns, including 3 silos; stable room for 200 head of cattle, storage room for hay, grain and farm tools. For price and further particulars, address Wm. B. Van Alstyne, owner, Kinderhook, N. Y. Will rent.

No. 151.— Farm of 125 acres; located 3 miles from Niverville, on line of B. & A. R. R.; $\frac{1}{4}$ mile from school; 2 miles from churches, and 3 miles from milk station. Highways, state road. Nearest city, Albany, population 107,979, 12 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, sandy loam and clay. Acres in timber, 20, pine, hemlock, oak and birch. Acres tillable, 100. Fruit, 1,200 apple, 100 peach, 350 pear, 60 cherry and a few plum trees. Adapted to wheat, corn, oats and buckwheat. Fences, wire, in fair condition. House, 14 rooms, electric lights and steam heat. Outbuildings: basement barn, poultry

houses, granary, ice house and hog house, all practically new. Watered, house and barns by springs. Occupied by owner. Reason for selling, advanced age. Price, \$22,000. Terms, easy. Address E. Gregory, Niverville, N. Y.

No. 152.— Farm of 158 acres; located $1\frac{1}{2}$ miles from Valatie; 2 miles from railway station at Niverville, on line of B. & A. R. R.; $1\frac{1}{2}$ miles from school, churches and milk station. Highways, good. Nearest city, Albany, population 107,979, 17 miles distant, reached by rail or highway. General surface, level. Nature of soil, sandy loam. Acres in timber, 8, variety. Acres tillable, 150. Fruit, 300 apple trees and enough small fruit for family use. Adapted to rye, corn, oats, potatoes and fruit. Fences, American wire, in good condition. House, 9 rooms, steam heat and in excellent condition. Outbuildings, 2 large barns, store house, horse barn, corn house and garage. Watered, house, by wells and cistern; barns, by well, and fields by stream. Occupied by owner. Reason for selling, ill health. Price, \$15,000. Terms, to suit purchaser. Address C. C. New, Valatie, N. Y.

No. 153.— Farm of 103 acres; located $2\frac{1}{2}$ miles from Niverville; $\frac{1}{8}$ mile from railway station at Post Road, on line of B. & A. R. R.; $\frac{1}{2}$ mile from school; 2 miles from churches. Highways, good. Nearest village, Valatie, population 1,410, 3 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, sandy loam. Acres in meadow, nearly all; in timber, 3. Acres tillable, 100. Fruit, about 30 apple trees. Adapted to grain, hay, fruits and vegetables. Fences, board, in fair condition. House, 9 rooms, in good condition. Outbuildings, 1 large and 3 small ones. Watered, house, by well and cistern; barns near creek; fields, by creek. Occupied by tenant. Reason for selling, other business. Price, \$3,600. Terms, \$1,300 cash and remainder on mortgage at 5 per cent. Address Frank H. Wood, State Education Department, Albany, N. Y.

TOWN OF LIVINGSTON

Population 1,522

No. 154.— Farm of 275 acres; located 4 miles from railway station at Linlithgo, on line of N. Y. C. R. R.; $\frac{1}{2}$ mile from Blue Stores P. O.; $\frac{1}{4}$ mile

from school; $2\frac{1}{2}$ miles from churches; $3\frac{1}{2}$ miles from creamery. Highways, state road. Nearest city, Hudson, population 11,544, 8 miles distant. Surface, level. Nature of soil, loam. Acres in meadow, 200; in natural pasture, 50; all tillable. Fruit, about 400 apple trees. Adapted to hay, grain, potatoes and dairying. Fences, wire, good. House, 2 stories, basement, 10 rooms. Outbuildings, 3 barns, 62x52, 45x38, 46x32, good condition. Watered, house by well; barns and fields, by well and springs. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$11,000. Terms, \$5,000 cash and \$150 a year until paid for. Address W. S. Wattles, owner, Box 124, Hudson, N. Y.

TOWN OF NEW LEBANON

Population 1,369

No. 155.—Farm of 38 acres; located 1 mile from New Lebanon P. O.; $\frac{1}{4}$ mile from railway station, on line of Rutland R. R.; $\frac{1}{2}$ mile from school; Churches nearby; $\frac{1}{4}$ mile from milk station. Highway, in fine condition. Nearest city, Pittsfield, Mass, population 40,000, 8 miles distant, reached by highway. General surface of farm, level. Nature of soil, loam. Acres in pasture, 10; in timber, 5. Tillable, 25. Orchard consists of about 35 apple trees in bearing condition. Adapted to general crops. House, 10 rooms, $1\frac{1}{2}$ stories, in good condition. Outbuildings, barn, wagon house, and other buildings, in fair condition. Watered, house by running water. Reason for selling, to settle estate. Price, \$2,500. Address Mrs. John W. O'Neil, owner, New Lebanon, N. Y.

No. 156.—Farm of 100 acres; located 1 mile from New Lebanon P. O. and railway station, on line of Rutland R. R.; $\frac{3}{4}$ mile from school and churches; 1 mile from butter factory and 6 miles from cheese factory. Highways, state road. Nearest city, Pittsfield, Mass., 11 miles distant, reached by state road. General surface, level. Nature of soil, clay loam. Acres that can be used in meadow, all, in natural pasture, about 10. All tillable. Best adapted to grain and hay. Fences, wire. Two story house, 8 rooms, in fair condition. Outbuildings, shed and 2 hay barracks. House and barns watered by well and fields by creek. Occupied by tenant. Reason for

selling, to settle an estate. Price, \$6,000. Terms, \$2,000 cash, balance on mortgage at 6%. Address Mrs. S. J. Tilden, owner, New Lebanon, N. Y. Will rent.

No. 157.—Farm of 110 acres; located $\frac{1}{2}$ mile from New Lebanon P. O. and railway station, on line of Rutland R. R.; $\frac{1}{2}$ mile from school; $\frac{1}{2}$ mile from churches; 2 miles from butter factory; 6 miles from cheese factory and 10 miles from milk station. Highways, state road and good dirt road, level. Nearest city, Pittsfield, Mass., 10 miles distant, reached by state road. General surface of farm, rolling. Nature of soil, clay loam. Acres that can be used as meadow, about 60 to 75; in natural pasture, about 25; in timber 10, hard wood. Acres tillable, 60 to 75. Fruit, apples, pears, etc. Best adapted to grain and hay. Fences, wire, good condition. House, 2 stories, 12 rooms, in excellent condition. Outbuildings, 300-foot, 2-story barn, cow and horse stables, sheep pens, poultry house, corn crib, etc., all in excellent condition. House and barns watered by running water. Occupied by tenant. Reason for selling, to settle an estate. Price, \$11,000. Very favorable terms can be arranged. All buildings and fences practically new 5 years ago. Address J. H. Reynolds, owner, New Lebanon, N. Y.

No. 158.—Farm of 60 acres; located 1 mile from village of West Lebanon, post-office, hotel, church and school; $\frac{1}{2}$ mile from state road running from Albany; 12 miles from Chatham, population 2,389, on line of Rutland R. R.; $\frac{1}{2}$ mile from railway station and on R. D. and telephone line. 30 acres in meadow; in pasture, 15; in timber, 15, pine, chestnut and hemlock. Farm keeps 6 cows and team. Fruit, 50 bearing apple trees, also pears, plums and grapes. House, $2\frac{1}{2}$ stories, 15 rooms. Outbuildings, wood house, wagon house, corn house, hog and poultry house with barn, 20x40, and shed attached, all in good condition. Watered by well and springs. Price, \$2,200. Terms, $\frac{1}{2}$ down, balance on bond and mortgage. Address H. J. Gibson, owner, West Lebanon, N. Y.

No. 159.—Farm of 72 acres; located $2\frac{1}{2}$ miles from Lebanon Springs on line of Rutland R. R.; $1\frac{1}{2}$ miles from school; $2\frac{1}{2}$ miles from churches; $2\frac{1}{2}$ miles from

FIG. 19.—HOUSE ON FARM NO. 144, TOWN OF GHENT, COLUMBIA COUNTY.

milk station. Highways, good. Nearest city, Pittsfield, Mass., population 35,000, 12 miles distant, reached by state road. General surface of farm, sloping. Nature of soil, slate. Acres in meadow, 50; in natural pasture, 12; in timber, 8, hemlock and hard wood. Fruit, 20 apple, 2 pear, 8 plum and 10 cherry trees. Adapted to corn, potatoes, oats, berries and hay. Fences, woven wire and rail, in good condition. House, 8 rooms, in good condition. Outbuildings, barns, 26x66, 28x40 and 24x40, also poultry house, hog house and granary. Watered, house, by well; barns and fields, by springs. Occupied by owner. Reason for selling, other business. Price, \$2,000. Terms, $\frac{1}{2}$ cash, remainder on mortgage. Address George W. Hatch, East Nassau, N. Y.

TOWN OF STUYVESANT

Population 1,841

No. 160.— Farm of 175 acres; located $\frac{3}{4}$ mile from Stuyvesant Falls P. O. and $\frac{1}{2}$ mile from railway station, on line of A. S. R. R.; $\frac{3}{4}$ mile from school and churches; $\frac{1}{2}$ mile from butter factory, cheese factory and milk station. Highways, state road. Nearest city, Hudson, population 11,544, 10 miles distant, reached by rail or highway. General surface of farm, rolling. Soil, mostly loam. Acres that can be used as meadow, 50; in natural pasture, 15; in timber, 15, oak, pine and hickory. Acres tillable, 150. Fruit, fine apple orchard, 18 years old, about 600 apple, 1,000 pear and 150 cherry trees. Best adapted to fruit. Fences, wire, fair condition. 11 room house, good condition, old fashioned fireplace, electric lights, power from Albany Southern company. Outbuildings, large barn, two poultry houses, ice house and sanitary cow stables. House watered by well; barns, by well. Hudson River, 2 miles distant. Occupied by owner. Reason for selling, wish to retire. Price, \$20,000. Terms on application. Also 7 room tenant house. Address E. Dick, owner, Kinderhook, N. Y., R. D.

No. 161.— Farm of 123 acres; located 2 miles from Stuyvesant P. O. and railway station, on line of N. Y. C. R. R.; 2 miles from school; 2 miles from churches and 4 miles from milk station. General surface of farm, rolling. Altitude, 200 feet. Soil, clay loam and clay. Acres that can be used as meadow 80, in natural pasture 30, in timber 10, oak,

hickory and a little pine. Acres tillable, 80. Fruit, apples for family use. Adapted to hay, grain, corn and potatoes. Fences, plain and woven wire, fair condition. Main house 18x25, with wing 13x17, house No. 2 18x23, with wing 14x17, fair condition. Outbuildings, barn 31x72, horse and cow barn 30x50, milk house, wagon house, poultry house and pig house. House watered by artesian well and cistern, barns same, and fields by springs and brook. Occupied by tenant. Reason for selling, owner a widow. Price on application. Address Mrs. Mary K. Best, owner, Stuyvesant, N. Y.

No. 162.— Farm of 176 acres; located $1\frac{1}{4}$ miles from Stuyvesant P. O. and railway station, on line of N. Y. C. R. R.; 1 mile from school; 1 mile from churches and 3 miles from milk station. Highways, good. Nearest city, Albany, population 107,979, 10 miles distant, reached by rail or highway. Surface of farm, rolling. Altitude, 200 feet. Soil, clay and clay loam. Acres that can be used as meadow 125, in natural pasture 25, in timber 25, pine, hickory and oak. Acres tillable, 125. Fruit, 100 apple trees of different varieties. Adapted to hay, grain, corn and potatoes. Fences, woven wire, first class condition. Two story house, in good condition. Outbuildings, wagon shed, barn, shed, horse stable, cow barn, corn house, poultry house and milk house. House watered by well, barns by (windmill) artesian well and fields by springs and brook. Occupied by tenant. Tenant has been on farm for 30 years. Reason for selling, owner a widow. Price on application. Address Mrs. Mary K. Best, owner, Stuyvesant, N. Y. Will rent to right party with option to buy.

TOWN OF TAGHKANIC

Population 741

No. 163.— Farm of 175 acres; located 6 miles from Craryville, on line of Harlem railway; $\frac{1}{8}$ mile from school; $\frac{3}{4}$ mile from churches, and 5 miles from milk station. Nature of highways, hilly but not rough. Nearest city, Hudson, population 11,417, 12 miles distant, reached by rail or highway. General surface of farm, part level, part rolling. Acres that can be used as meadow, 50; in natural pasture, 25; in timber, 25, oak, ash, chestnut, etc. Acres tillable, 125. Fruit, 75 apple trees, few plums and strawberries. Adapted to rye, oats,

potatoes and corn. Wire and rail fences, in fair condition. House, $1\frac{1}{2}$ stories, 9 rooms, good condition. Good main barn, carriage house, hog pen, 2 poultry houses. Will build and fill ice house this winter. House and barns

watered by well; fields, by spring and stream. Occupied by owner. Price, \$4,500. Terms, $\frac{1}{3}$ cash, balance on mortgage 5%. Large stream near house. Address Chas. E. Scutt, Craryville, N. Y., R. D. No. 1.

CORTLAND COUNTY

Area, 485 square miles. Population, 30,074. Annual precipitation, 48.41 inches. Annual mean temperature, 47.7° . Number of farms, 2,610. Average price of land, including buildings is \$31.73 per acre. County seat, Cortland.

This county lies in the central part of the state.

Its surface is hilly, rolling, and in places broken, consisting mostly of arable ridges with rich valleys between. The highlands are divided into general ridges extending north and south through the county. The northern part of the county spreads out into a high plateau broken by hills. The drainage is nearly all through the Tioughnioga river, which flows southward centrally through the county. The county is well watered, naturally drained. The soil upon the hills is principally a sand and gravelly loam; that in the valleys the same general character with a large mixture of disintegrated slate, shale and limestone. This is a distinctively agricultural county, although carriage, wirecloth and wagon manufacturing is quite extensive. Like most of the counties of New York State the ample railroad and transportation facilities bring it within easy reach of great markets. There is considerable timber scattered throughout the county, but not in large tracts. There are many maple groves from which sugar is made, the amount being given as 25,381 gallons of syrup and 118,550 pounds of sugar. There are 2,444 farms reporting domestic animals as follows: Dairy cows, 27,427; horses, 7,033; swine, 5,233; sheep, 3,616; poultry, 153,550; production of milk was 15,743,198 gallons, with total receipts of sale of dairy products of \$1,578,776. The leading crops are corn, 74,105 bushels; oats, 396,974 bushels; barley, 24,348 bushels; buckwheat, 110,793 bushels; potatoes, 750,187 bushels; hay and forage, 130,414 tons. Churches and schools abound throughout the county. A State Normal School is located at Cortland. This school with the 145 district schools, graded and high schools in villages give the amplest educational facilities. Twenty-five agricultural organizations are devoted to the interest of the farmer and sixty well-located dairy stations and factories are found. Apples and other orchard fruits are successfully raised throughout the county. There is an increase of 19.6 per cent over the value of farm property in the last decade. This increase is largely represented by live stock, machinery and implements. The price of land has declined eighty-three cents per acre in ten years, but the farm buildings are worth \$1,360,000 more than in 1900. The next few years will undoubtedly change these statistics, because of the greater demand for New York farm lands which is increasing every year.

TOWN OF CININNATUS

Population 958

No. 164.—Farm of 286 acres; located 3 miles from Cincinnatus P. O., R. D.; $1\frac{1}{4}$ miles from railway station at Gee Brook on line of Lackawanna R. R.; 2 miles from school, churches, butter factory and cheese factory; 3 miles from milk station. Highways, level, good condition. Nearest large village, Cincinnatus, 3 miles distant, reached by highway. Surface, nearly level, slightly sloping. Altitude, 1,040. Soil, part light clay loam, balance, gravelly loam. Acres in meadow, 90; in natural pasture, 100; in timber, 50, mostly second growth. All tillable. About 60 standard apple trees,

also pears, grapes, etc. Best adapted to the raising of corn, potatoes and grains. Fences, good, mostly wire. House, 12 rooms, with porch on two sides, in fine condition. Outbuildings, basement barn, 44x100, built 9 years ago; stanchions for 60 head of cattle and box stalls; horse stable; hog house for 40 hogs; poultry house; barn winters vegetables without freezing. Every convenience. Watered, house, by piped spring; barn, by spring; fields, by river and springs. Occupied by tenant. Reason for selling, owner is a widow. Price, \$35 per acre. Terms reasonable. Address Mrs. Josephine Harrington, owner, Cincinnatus, N. Y. Will rent.

FIG. 20.—BUILDINGS ON FARM No. 144, TOWN OF GHENT, COLUMBIA COUNTY.

FIG. 21.—HOUSE ON FARM No. 146, TOWN OF GHENT, COLUMBIA COUNTY.

No. 165.—Farm of 300 acres, located 2 miles from East Freetown P. O.; 3 miles from Cincinnatus, on line of Lackawanna R. R.; station on farm, $\frac{1}{8}$ mile from house; $\frac{3}{4}$ mile from school; 2 miles from milk station; 3 miles from churches, butter factory, cheese factory and condensing plant. Highways, good. Nearest city, Cortland, population, 12,367, 14 miles distant, reached by rail or highway. Surface of farm, gently sloping. Altitude, 1,600 feet. Soil, gravelly loam. Acres in meadow, 100; in pasture, 180; in timber, 20, mostly beech. Fences, wire, good condition. Eleven-room house, fair condition. Outbuildings, new barn, 50x100, concrete floor in basement, will hold 90 cows, stanchions now for 40, milk house with running spring water, enclosed shed, 17x160; drinking trough with running water in barnyard, pastures watered by brook, never run dry. Contract let for state road to be built in 1917 from Cortland through farm, and eventually to Binghamton. Occupied by tenant. Price, \$5,500. Terms, part cash, balance can remain indefinitely. Address Walter S. Bull, owner, Cortland, N. Y.

TOWN OF HOMER

Population 3,745

No. 166.—Farm of 150 acres; located $3\frac{1}{2}$ miles from Homer P. O., R. D. 7, and railway station, on line of D., L. & W. Ry.; $\frac{3}{4}$ mile from school; $3\frac{1}{2}$ miles from churches and milk station; $6\frac{1}{2}$ miles from milk condensing plant. Highways, somewhat hilly but good. Nearest large village, Homer, population 2,871, $3\frac{1}{2}$ miles distant; nearest city, Cortland, population 12,367, $6\frac{1}{2}$ miles distant, reached by highway. Surface of farm, nearly level. Altitude, about 1,100 feet. Soil, gravel loam. Acres in meadow, 85; in natural pasture, 55; in timber, 10, second growth beech and maple; acres tillable, 135. Fruit, fine apple orch-

ard, also plums and cherries. Adapted to hay, grain, potatoes, cabbage and corn. Fences, mostly wire, good condition. House, 10 rooms, good. Outbuildings, barn 26x124, silo, 22 stanchions; 3 box stalls, also room for 4 horses. Watered by well, spring and brook. Occupied by owner. Reason for selling, owner desires to retire from business. Price, \$5,000. Terms, \$2,250 cash, balance on mortgage at 5 per cent. Address P. O'Connor, owner, Cortland, N. Y.

TOWN OF LAPEER

Population 465

No. 167.—Farm of 240 acres; located 2 miles from Marathon P. O., R. D. No. 2, and railway station, on line of D., L. & W. R. R.; $\frac{3}{4}$ mile from school; 2 miles from churches; $1\frac{1}{4}$ miles from butter factory and cheese factory; 2 miles from milk station and condensing plant. Highways, good. Nearest city, Cortland, population 12,367, 14 miles distant, reached by rail or highway. General surface, level and a little rolling. Altitude, 1,351 feet. Nature of soil, good. Acres that can be used as meadow, 180; in natural pasture, 80; in timber, 60, maple, beech, ash, hickory, basswood, cherry, hemlock and pine. Acres tillable, 180. Fruit, plums, pears, apples, cherries, etc. Fine maple sugar orchard of over 2,000 trees. Adapted to all kinds of crops. Fences, board, rail and wire, in good condition. House, large, with two wings and wood house, in good condition. Outbuildings: barn, 36x80, nearly new; granary, 22x28; horse barn, 30x52; barns, 24x28 and 30x48. House watered by well, barns by spring and well, fields by creek and springs. Tioughnioga river, 2 miles distant. Occupied by owners. Reason for selling, ill health. Address O. A. & J. H. House, owners, R. D. No. 2, Marathon, N. Y. Owners will rent with option to buy.

DELAWARE COUNTY

Area, 1,580 square miles. Population, 45,995. Annual precipitation, 42.7 inches. Annual mean temperature, 45.7°. Number of farms, 5,044. Average price of farm land, including buildings, is \$26.65 per acre. County seat, Delhi.

Delaware stands the sixth largest county of the state and is located centrally, distant about seventy miles from Albany.

Its surface is a hilly and mountainous upland, divided into three general ridges by the valleys of the two branches of the Delaware river. In the southern part these ridges form a mountainous region, with high rocky peaks and wild, narrow ravines. In the northern part, the highlands are less wild and precipitous and the whole region assumes the character of a hilly upland. The soil is generally of a

dark reddish color composed of disintegrated rock and shale. In the valleys are many strips of very fertile alluvium. There is considerable fine woodland on the higher portions of the county. The wells, springs, streams, rivers, ponds and lakes are very numerous and remarkable for their purity and clearness, and are also noted for the enormous water power they afford.

Dairying is the principal pursuit and the county has become famous for its quality of butter. There are excellent facilities for transportation of all products to the markets of the state, the county being but a short distance from New York City. The valuation of farm property is placed at \$27,714,855, a 25 per cent increase over 1900. Domestic animals are classified as follows: dairy cows, 78,073; horses, 12,022; swine, 10,526; sheep, 9,302; poultry, 239,755. The total production of milk was 41,144,471 gallons, and the total receipts from the sale of dairy products was \$4,724,951, these figures being excelled only by St. Lawrence County.

The principal crops are as follows: corn, 45,785 bushels; oats, 337,938 bushels; buckwheat, 132,284 bushels; potatoes, 479,060 bushels; hay and forage, 247,773 tons. Apples are grown in abundance and are of the finest quality. Churches of different denominations are scattered throughout and 346 district schools are conveniently located. Twenty-four agricultural associations are devoted to the best interest of the farmer. There are 68 dairy stations and factories in the county averaging over three to each town. Forty-two miles of state road and 2,220 miles of improved highway furnish excellent local transportation facilities.

TOWN OF ANDES

Population 2,084

No. 168.—Farm of 350 acres; located 60 rods from Union Grove P. O.; railway station on farm, on line of D. & N. R. R.; $\frac{1}{4}$ mile from school and churches; 2 miles from butter factory and cheese factory; $\frac{1}{8}$ mile from milk station and 6 miles from condensing plant. Highways, good dirt roads, proposed state road. General surface, 100 acres river flat, balance rolling. Altitude, 1,250 feet. Nature of soil, loam and red slate, some gravel. Acres that can be used as meadow, 150; in natural pasture, 100; in timber, 100; timber reserved except enough for use of farm. Fruit, several apple trees. Adapted to corn, oats, buckwheat, rye and hay. Fences, mostly woven wire, new. House, frame, 28x50, 2 stories, large veranda, also tenant house, 24x40, fair condition. Outbuildings, 2 small barns, 2 hay barns, sheds, etc. House watered by springs, barns, by springs, and fields, by springs and river. In Catskill Mountains, Delaware river runs length of farm for a mile; good location, fishing, etc. Occupied by caretaker. Reason for selling, bought it for timber and gravel bank, no use for farm. Price, \$9,000. Terms, $\frac{1}{3}$ cash, balance, partial payments. Address W. T. Austin, owner, Margaretville, N. Y.

No. 169.—Farm of 8 acres; located at Union Grove; 60 rods from railway station at Union Grove, on line of D. & N. R. R.; near school; 2 miles from churches; 2 miles from two butter factories; 6 miles from cheese factory and

condensing plant. Milk station near by. Highways, good. General surface, slightly rolling. Altitude, 1,200 feet. Nature of soil, loam. Acres that can be used as meadow, all; now used as meadow, 4; in natural pasture, 4. Acres tillable, all. Fruit, apples, pears, cherries and small fruit. Adapted to all crops. Fences, wall and wire. 15 room house, good condition. Barn, 24x42, with shed attached, 15x40; barn, 18x22; 2 poultry houses and ice house. Watered, house, by spring; barns, by spring, and fields by spring. Occupied by owner. Reason for selling, death of husband. Price, \$3,500. Terms, $\frac{1}{2}$ cash, balance on easy terms. Address Mary C. Van Kenren, owner, Union Grove, N. Y.

No. 170.—Farm of 258 acres; located 3 miles from Andes P. O., R. D., and railway station on line of Delaware & Northern R. R.; 1 mile from school; 3 miles from churches, butter factory and milk station. Highways, state road. Nearest village, Delhi, population 1,743, 11 miles distant, reached by rail or highway. General surface, rolling and level. Altitude, 2,000 feet. Acres that can be used as meadow, 100; in pasture, 100; in timber, 58, hard wood. Acres tillable, 200. Fruit, 100 apple, 20 pear, 10 cherry and 12 plum trees. Adapted to oats, corn, buckwheat, millet, etc. Fences, stone wall and wire. House, 30 x 40; furnace, hot and cold water. Outbuildings: barn, No. 1, 32x80, new stanchions for 40 cows and 4 horses; No. 2, 26x70; horse barn, 26x36; tool house, 20x24; barn installed with milking machine; house and barns

**FIG. 22.—HOUSE ON FARM No. 140, TOWN OF GALLATIN, COLUMBIA
COUNTY.**

**FIG. 23.—HOUSE OF FARM No. 149, TOWN OF KINDERHOOK, COLUMBIA
COUNTY.**



watered by springs; fields, by springs and brooks. Occupied by owner. Reason for selling, poor health. Price, \$8,000. Terms to suit purchaser. Will sell personal property, if desired. Address, Charles T. Hyzer, owner, Andes, N. Y. Owner will rent.

TOWN OF DELHI

Population 2,852

No. 171.—Farm of 220 acres, $2\frac{1}{2}$ miles from Delhi P. O. and railway station on O. & W. R. R.; $\frac{1}{2}$ mile from school; $2\frac{1}{2}$ miles from churches, butter factory, cheese factory, milk station and condensing plant. Good soil. Highways, state road. Acres in meadow, 60; pasture, 110; timber, 50, beech, birch and maple. Fruit, apples, pears, cherries and plums. House of 11 rooms, in good condition, hot and cold water. Silo; barn, 100x46; wagon house, 40x60; granary, ice house, poultry house, shop and smoke house. Watered by cold springs with a fine trout brook running through premises. Fences, stone wall and wire, in good condition. The farm will keep 45 or 50 cows and has a good milk market near at hand. Occupied by owner. Reason for selling, owner a widow in poor health. Price, \$7,000. Terms, \$3,000 on a 5% mortgage. Name and address of owner, Olive A. Benedict, Delhi, N. Y.

TOWN OF HANCOCK

Population 4,908

No. 172.—Farm of 127 acres; located $\frac{1}{4}$ mile from French Woods P. O.; 4 miles from railway station at Lordville, on line of Erie and O. & W. R. R.; $\frac{1}{8}$ mile from school and churches; 4 miles from milk station, butter factory, cheese factory and condensing plant. Highways, good dirt road. Nearest village, Hancock, population 1,356, 8 miles distant, reached by highway. Surface of farm, rolling. Altitude, about 1,800 feet. Soil, red shale, very good. Acres in meadow, 60; in natural pasture, 40; in timber, 15, hardwood. Acres tillable, 100. Fruit, large orchard of apples, pears and plums. Adapted to hay, corn, potatoes, etc. Fences, wire and stone, fair condition. House, almost new, 35 x 35, 29 rooms. Outbuildings, barn, 36 x 60, good condition; ice house, shop and dancing pavilion, 30x60, good condition. Watered, house, by running water; barns, by springs; fields, by

creeks. 96 acres in lake and $\frac{1}{8}$ of it belongs to this property. Reason for selling, owner wishes to retire. Price, \$8,500. Terms, \$5,000 cash, balance on mortgage. Address Frank L. Gardner, owner, French Woods, N. Y.

TOWN OF HARPERSFIELD

Population 1,223

No. 173.—Farm of 253 acres; located 1 mile from Harpersfield P. O.; 4 miles from railway station at Stamford on line of U. & D. Ry.; $\frac{1}{4}$ mile from school; 1 mile from churches; 3 miles from butter factory, cheese factory and condensing plant; 4 miles from milk station. Highways, in good condition, near state road. Nearest large village, Stamford, population 1,060, 4 miles distant. General surface of farm, rolling and level. Acres in meadow, 70; in pasture, 140; in timber, 25, maple, pine and hemlock. Acres tillable, 100. Fine young apple orchard. Adapted to corn, oats, potatoes, buckwheat, hay and rye. Fences, wall and wire, in good condition. House, 2 stories, in good condition. Outbuildings, 2 cow barns, horse barn, hog and poultry house, granary, feed room, silo 15x15x26. House, barn and fields watered by wells and springs. Catskill mountains and Delaware river nearby. Occupied by tenant. Reason for selling, other business. Price, \$5,000. Terms, part cash, balance on mortgage. Cows, horses, young stock and tools may be purchased if desired. Owner will rent. Address Mrs. M. S. Wilcox, owner, Jefferson, N. Y.

TOWN OF MASONVILLE

Population 988

No. 174.—Farm of 15 acres; located 1 mile from Unadilla P. O., R. D. 2; 4 miles from railway station at Maywood, on line of O. & W. R. R.; $1\frac{1}{2}$ miles from school; 2 miles from cheese factory and Protestant churches; 4 miles from milk station and milk condensing plant. Highways, good. Nearest large village, Sidney, population 2,641, 7 miles distant, reached by rail and highway. Surface of farm, level. Altitude, 1,400 feet. Soil, loam. Acres in meadow, 8; in natural pasture, 7. Acres tillable, 15. Fruit, 9 apple trees. Best adapted to truck gardening and hay. Fences, wire, stone wall and rail, good condition. House, small, 4 rooms below, upper part not finished. Outbuildings, good sized barn, fair condition, poultry house and

granary. Watered, house, by well; barn, by spring; fields, by creek. Reason for selling, owner a widower and obliged to break up housekeeping. Price, \$1,000 cash, or \$1,100 with payment of \$600 cash and remainder on mortgage. Address E. A. Fletcher, owner, Hamilton, N. Y. Owner will rent.

No. 175.—Farm of 162 acres; located $3\frac{1}{2}$ miles from Masonville P. O.; 9 miles from railway station at Sidney, on line of D. & H. and O. & W. R. Rs., near school; $3\frac{1}{2}$ miles from churches, butter and cheese factories and milk station. Highways, rolling, but in good condition. Nearest large village, Sidney, population 2,641, 9 miles distant, reached by highway. Surface, rolling and partially hilly. Acres in meadow, 60; in natural pasture, 75; in timber, 25; acres tillable, 140. Fences, wire and rail, poor condition. House, 8 rooms, poor condition. Barn, in poor condition. Watered, house, by running water and wells; fields, by springs. Occupied by owner. Reason for selling, owner has other business. Price, \$1,500. terms, \$600 cash, balance on mortgage. Address F. L. Ostrander, owner, Masonville, N. Y. Will rent.

TOWN OF MEREDITH

Population 1,472

No. 176.—Farm of 173 acres; located 7 miles from Delhi P. O., R. D. 2; 3 miles from railway station at East Meredith, on line of U. & D. R. R.; 3 miles from church; 1 mile from school and milk station; 7 miles from butter factory, cheese factory and condensing plant. Nearest city, Oneonta, population 10,474, 12 miles distant. Surface of farm, rolling. Altitude, about 1,700 feet. Acres in meadow, 50; in natural pasture, 80; in timber, 43, hard wood; acres tillable, 150. Fruit, apples and pears. Best adapted to hay and potatoes. Fences, stone and wire, good condition. House, 16 rooms, good condition. Barn, 30x40; wagon house, 28x38; storage building, 26x36; hog house, etc. Watered by living springs. Occupied by owner. Reason for selling, poor health of owner. Price, \$6,000. Terms, cash. Address Miss Johanna R. Spier, owner, Delhi, N. Y., R. D. 2.

TOWN OF SIDNEY

Population 4,215

No. 177.—Farm of 135 acres; located $\frac{1}{4}$ mile from P. O., and railway station

at Franklin Depot, on line of O. & W. R. R.; $\frac{1}{4}$ mile from school and milk station; $2\frac{1}{2}$ miles from churches; 4 miles from butter factory and 3 miles from condensing plant. Highways, good. Nearest large village, Walton, population 3,606, 10 miles distant, reached by rail and highway. Surface, nearly level, part, slightly rolling. Soil, red and part rich loam. Acres in meadow, 60; in natural pasture, 65; in timber, 5, beech, birch and maple; acres tillable, 100. Fruit, apples. Best adapted to hay, grain and potatoes. Fences, wire, board and stone wall. House, 24x36, with wing, 24x38, 12 rooms, good condition. Outbuildings, barn, 28x64, cow stable attached, with new concrete floors; barn, 26x36, wagon house attached, 5 good horse stalls, silo, poultry house and granary. Watered, house, by never failing spring; barns and fields, by spring and creek. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$4,000. Terms, \$1,200 cash, balance on mortgage, 5%. Will sell 25 cows, if desired. Address M. B. Fish, owner, Sidney, N. Y.

No. 178.—Farm of 230 acres; located $\frac{1}{2}$ mile from Walton P. O., R. D. No. 3; 3 miles from railway stations at Franklin and Maywood, on line of N. Y., O. & W. R. R.; 1 mile from school; 1 mile from churches; 1 mile from butter factory; 3 miles from cheese factory; 1 mile from milk station and 8 miles from condensing plant. Highways, good. Nearest large village, Walton, population 3,606, 8 miles distant, reached by rail or highway. General surface, rolling. Altitude, 1,800 feet. Nature of soil, loam. Acres that can be used as meadow, 150; in natural pasture all, except timber, in timber 70, oak, chestnut, maple, ash, beech and some pine. Acres tillable, 150. Fruit, 20 apple, plum and pear trees. Best adapted to hay, corn and oats. Fences, stone wall and barbed wire, good condition. House, 9 rooms, built 10 years. Outbuildings, barn 38x56, built in 1912; wagon house 30x40, good frame; hog pen and poultry house, new. House watered by spring, barns by spring and fields by spring. Reason for selling, ill health. Price, \$6,000. Will sell personal property, if desired. Address Mrs. Edith Forsyth Wheat, owner, Franklin, N. Y., R. D.

No. 179.—Farm of 120 acres; located $1\frac{1}{2}$ miles from Franklin station, on line

FIG. 24.—HOUSE ON FARM NO. 164, TOWN OF CINCINNATUS, CORTLAND COUNTY.



of O. & W. R. R.; 1 mile from school and churches; $1\frac{1}{2}$ miles from butter factory, cheese factory and milk station; 3 miles from condensing plant. Highways, good. Nearest city, Oneonta, population 10,474, 15 miles distant, reached by rail or highway. General surface, level. Nature of soil, loam. Acres that can be used as meadow, 80; in natural pasture, 65; in timber, 30, pine, hemlock, chestnut, oak and ash. Acres tillable, 90. Fruit, 30 apple and 12 plum trees. Adapted to hay, oats, corn, wheat and buckwheat. Fences, stone wall and barbed wire. House, 30x46, in good condition. Outbuildings, barn, 36x36; barn, 24x40; wagon house, 24x30; granary and woodhouse. Watered, house, by well; barns, by stream, and fields, by springs. Occupied by tenant. Reason for selling, other business. Price, \$5,000. Address Mr. & Mrs. D. D. Wheat, Franklin, N. Y., R. D. 1. Owner will rent.

TOWN OF WALTON

Population 5,275

No. 180.—Farm of 189 acres; located $1\frac{1}{2}$ miles from Beerston P. O.; 2 miles

from railway station at Beerston, on line of N. Y., O. & W. R. R.; $1\frac{1}{4}$ miles from school and church; 2 miles from milk station and 6 miles from condensing plant. Highways, state road. Nearest village, Walton, population 3,606, 6 miles distant, reached by rail and highway. General surface of farm, slightly rolling, pastures hilly. Altitude, 1,214. Nature of soil, sand and gravel loam. Acres used as meadow, 60; in natural pasture, 40; in timber, 89, second growth of hard wood. Acres tillable, 85. Fruit, 100 apple trees; small quantity of cherry, plum and pear trees and small fruits. Adapted to hay, corn, oats, potatoes and buckwheat. Fences, wire and stone wall, in need of repair. House, 26x32x22, in good condition. Outbuildings, barn, 45x130x28; poultry house, 18x90; old barn, 30x40x14, in good condition. Watered, house, by spring; barns, by spring; and fields, by river and spring. A maple orchard of 500 trees; house and barn lighted with acetylene gas, bath in house. Occupied by owner. Reason for selling, old age. Price, \$13,500. Terms, \$8,000 cash, balance on mortgage at 5%. Address John Q. Barlow, Beerston, N. Y.

DUTCHESS COUNTY

Area, 810 square miles. Population, 91,044. Annual precipitation, 54.1 inches. Annual mean temperature, 50.9°. Number of farms, 3,600. County seat, Poughkeepsie.

This county lies on the eastern line of the state bounded by Connecticut on the east and by the Hudson river on the west, about midway between Albany and New York City.

Its surface is principally rolling and hilly. A wide valley running north and south through the entire portion of the county, bounded on the east by the Taghkanick mountains and on the west by the Matteawan and Fishkill ranges. Within this valley lie some of the finest farms of the state. The county is rich in mineral rocks and near its center there are quarries of marble, pure, white, fine grain and susceptible to high polish. The soil of the county is generally of a fine quality of sandy and gravelly loam. Agriculture is the leading industry and offers attractions to the farmer on account of the variety and fertility of the soil and the nearness to the markets of New York City. As choice apples as can be grown anywhere are grown in this county, many of which are exported to Europe. The principal crops are corn, 744,303 bushels; oats, 468,039 bushels; wheat, 32,920 bushels; buckwheat, 54,504 bushels; rye, 80,229 bushels; potatoes, 300,275 bushels; hay and forage, 122,406 tons. Domestic animals are reported as follows: Dairy cows, 31,241; horses, 10,945; swine, 19,798, sheep, 14,719; poultry, 236,074. The average price of farm land with buildings is \$58.52 per acre. The total valuation of all farm property is \$32,968,710, an increase of nearly \$8,000,000 over the value given in the census of 1900. This increase is exceeded only by six other counties of the state. The dairies of the county produced 18,869,564 gallons of milk and the receipts for the sale of dairy products were \$2,084,655.

There are twenty-nine agricultural organizations in the county, including twenty-four granges; also thirty-two milk stations and factories. The educational advantages are extraordinary, there being 183 district schools, several standard high schools and St. Stephen's College at Annandale. Vassar, one of the leading women's

colleges in the country, is located at Poughkeepsie, together with private and military academies. Dutchess county presents great possibilities for farm investment and general farming, in common with a large number of the other counties of the state.

TOWN OF AMENIA

Population 2,204

No. 181.—Farm of 265 acres; $\frac{1}{2}$ mile from South Amenia P. O., R. D.; $2\frac{1}{2}$ miles from Wassaic, on line of Harlem R. R. Highways, good. Soil, gravelly loam. Acres in meadow, 175; tillable, 175; natural pasture, 40; timber, 50, chestnut, oak, maple and hickory. Fruit, 100 apple trees. Adapted to all crops. Fences, wire, in good condition. House, 2 stories, 8 rooms, with lean-to, all new. Barn, large, 3 stories, in good condition. Premises watered by springs and brook. Farm lies in valley, $1\frac{1}{2}$ miles wide, at the foothills of the Taghkanic range. Reason for selling, to close an estate. Price, \$12,000. Terms part cash, balance on mortgage. Address Edward G. Reynolds, owner, Dover Plains, N. Y.

TOWN OF EAST FISHKILL

Population 2,173

No. 182.—Farm of 190 acres; located 1 mile from Hopewell Junction R. D. and railway station, on line of N. Y., N. H. & H. and C. N. E. R. Rs.; $\frac{1}{2}$ mile from school; $\frac{1}{4}$ mile from churches and 1 mile from milk station. Highways, good. General surface of farm, slightly rolling. Altitude, 1,000 feet. Nature of soil, first class loam. Acres that can be used as meadow 160; in natural pasture 20; in timber 10, mostly oak. Acres tillable, 160. Fruit, 125 apple trees, Baldwins. Adapted to all kinds of crops. Fences, stone wall, good condition. House, main part $45 \times 30\frac{1}{2}$, kitchen and dining room 42×28 . Outbuildings, cow barn 51×30 , barn No. 2 31×17 , large barn, stanchions for 26 cows and small barn. House watered by spring, barns by running water and fields by brooks and springs. Occupied by tenant for one year. Reason for selling, owner retired. Price, \$15,000. Terms, cash. Buildings in first class condition, house painted white, outbuildings painted red. Address J. D. Buck, owner, 18 Willow street, Beacon, N. Y.

TOWN OF FISHKILL

Population 3,214

No. 183.—Farm of 160 acres; located $1\frac{1}{2}$ miles from Hopewell Junction P. O. and railway station, on line of C. N. E.

and N. Y., N. H. & H. R. Rs.; 1 mile from school; 1 mile from churches and milk station. Highways, state road. General surface of farm, slightly rolling. Altitude, 1,000 feet. Nature of soil, loam. Acres that can be used as meadow, 100; in natural pasture, about 40; in timber 20, variety. Acres tillable, 125. Fruit, about 50 apple trees, different varieties. Adapted to all kinds of crops. Fences, stone wall, in good condition. House 45×55 , 10 rooms, excellent condition. Outbuildings, cow barn 41×59 , horse barn 24×57 , stock barn 17×30 , poultry house and scratch shed 12×53 , granary and tool house 19×22 , wood house 10×12 , pig house 10×36 , all in excellent condition. House watered by well, barns by windmill and fields by brooks and springs. Occupied by tenant. Worked on shares for half; leased for one year. Reason for selling, owner retired. Price, \$10,000. Terms, cash. Excellent farm. Address J. D. Buck, owner, 18 Willow street, Beacon, N. Y.

TOWN OF HYDE PARK

Population 3,144

No. 184.—Farm of 95 acres; located $3\frac{1}{2}$ miles from Poughkeepsie P. O., R. D. 1 and railway station on line of N. Y. C. R. R.; $\frac{3}{4}$ mile from school; $3\frac{1}{2}$ miles from churches; 3 miles from milk station. Highways, good, some state road. General surface of farm, rolling. Nature of soil, loam. Acres in meadow, 12; in pasture, 10; in timber, 8, oak, elm and chestnut; acres tillable, 65. Fruit, 20 apple trees, small fruit for home use. Fences, stone, in good condition. House, main part 30×40 , 2 stories, addition 18×24 , $1\frac{1}{2}$ stories, 11 rooms. Outbuildings: wagon house, 39×40 , new; old wagon house, 24×20 ; barn No. 1, 33×45 , barn No. 2, 45×18 ; poultry house, 20×39 ; wood house, 18×18 and corn crib, 3 green houses, each 120 feet long, all in good condition. House watered by well and cistern; barns, by windmill and creek; fields, by springs and brooks. Occupied by tenant. Reason for selling, to settle estate. Price, \$10,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address Mrs. K. C. Todd, owner, R. D., Poughkeepsie, N. Y. Will rent.

FIG. 25.—BARN ON FARM 164, TOWN OF CINCINNATUS, CORTLAND
COUNTY.

FIG. 26.—BARN ON FARM No. 165, TOWN OF CINCINNATUS, CORTLAND
COUNTY.



TOWN OF MILAN

Population 824

No. 185.— Farm of 147 acres; located 6 miles from Red Hook P. O., R. D., and railway station, on line of C. N. E. R. R.; $\frac{1}{2}$ mile from school; $\frac{1}{4}$ mile from churches. Highways, state road. Surface of farm, rolling. Soil, loam. Acres that can be used as meadow, 30; in timber 20, oak, good quality. Acres tillable, 127. Fruit, small apple orchard. Adapted to hay, grain, potatoes, etc. Fences, wire and rail, good condition. House, 14 rooms, slate roof, in fine condition. Outbuildings, 3 barns, wagon house, woodshed, poultry house, tenant house, all in good condition. Watered, house and barns by running water, fields by springs and brook. Occupied by owner. Reason for selling, has other property. Price and terms on application. Farm slopes to the south. Address Mrs. Mary R. Lant, owner, East Chatham, N. Y.

No. 186.— Farm of 594 acres; located 7 miles from Red Hook P. O., R. D. No. 45; $1\frac{1}{2}$ miles from railway station at Jackson Corners, on line of C. N. E. R. R.; adjoining school; 2 miles from churches and 6 miles from milk station. Highways, hilly. Nearest village, Pine Plains, 5 miles distant, reached by rail and highway. General surface, half rolling and half hilly. Altitude, 300 feet. Nature of soil, clay loam and slaty. Acres that can be used as meadow 275, in natural pasture 150, in timber 120, chestnut, white oak and a little pine; probably \$3,000 worth of good timber and lots of hardwood. Acres tillable, 400. Fruit, 600 apple trees, a few bearing pears, lots of cherry trees and plenty of grapes. Adapted to hay, corn, rye, oats, etc. Ideal dairy farm or magnificent site for commercial orchard. Fences, stone and rail, fair condition. House, (1) 12 rooms, splendid condition; (2) 15 rooms, and (3) 4 room cabin, suitable for help. Outbuildings, 6 barns, one recently remodeled, 5 others, fair condition; silo, wagon shed, big shop; barns will average about 40x60. Houses watered by wells, barns by 2 springs and other wells, fields by brook through place and springs. Occupied by owner. Reason for selling, has another farm. Price, \$15,000. Terms, half cash. Would divide farm so each would have a house and 3 barns; \$9,000 for most desirable half, \$6,500 for other half. Address James Taylor Petty, owner, Red Hook, N. Y., R. D. No. 45.

III—5

TOWN OF NORTHEAST

Population 2,342

No. 187.— Farm of 180 acres; located $1\frac{1}{4}$ miles from Boston Corner P. O., R. D. 34, from Millerton; $1\frac{1}{2}$ miles from railway station at Boston Corner, on line of N. Y. & Harlem and C. N. E. R. R.; $\frac{3}{4}$ mile from school; $1\frac{1}{4}$ miles from milk station. Highways, good. Nearest large village, Millerton, population 890, 6 miles distant, reached by rail and highway. Soil, lime and gravel loam, high state of cultivation. Acres in meadow, 80; in natural pasture, 60; in timber, 40, chestnut, oak and maple; acres tillable, 140. Fruit, apples, pears, cherries and plums. Adapted to corn, hay and all kinds of grain. Fences, mostly wire, some wall and rail, good condition. House, 24x40, piazza whole length, $2\frac{1}{2}$ stories, 12 rooms. Outbuildings, barn, 32x66; horse and carriage barn, 30x66, with ell, 12x24; sheds, tenant house and barn. Watered by well, cistern, springs and brook. Occupied by owner and tenant. This farm keeps dairy of 20 to 25 cows; cuts 60 to 75 tons of hay. The house is well shaded by maple and chestnut trees and is situated on high ground overlooking the Harlem valley. Barns are painted and modern; dairy improvements. Reason for selling, advanced age of owner. Price, \$12,500. Address Chas. E. Lloyd, owner, Millerton, N. Y., R. D. 34.

No. 188.— Farm of 700 acres; located 1 mile from Millerton P. O., on line of Harlem R. R.; $1\frac{1}{2}$ miles from school; 1 mile from churches and milk station. Highways, state road. Nearest village, Millerton, population 890, 1 mile distant, reached by highway. General surface, slightly rolling. Altitude, about 600 feet. Acres tillable, 600. Fruit, apple orchard, some cherries, plums and other small fruit. Adapted to hay, corn, oats, wheat and rye. Fences, rail, stone and wire, in poor condition. House, large frame, in good condition. Outbuildings, dairy barn and horse barn, in fair condition. Watered, house, by well; barns, by spring, and fields, by stream. Occupied by owner. Price, \$50,000. Terms, reasonable. Address W. B. Culver, owner, Amenia, N. Y.

No. 189.— Farm of 340 acres; located 4 miles from Millerton P. O., on line of Harlem R. R.; $1\frac{1}{2}$ miles from school and 4 miles from churches and milk station. Highways, state road. Nearest

village, Millerton, population 890, 4 miles distant, reached by highway. General surface, rolling and level. Altitude, 600 feet. Nature of soil, clay and gravel loam. Acres that can be used as meadow, 250; in natural pasture, 70; in timber, 10, chestnut. Acres tillable, 250. Fruit, apples, cherries, pears and plums. Adapted to hay, oats, corn, wheat and rye. Fences, rail and wire, in good condition. Barns, large and in good condition. House, large and in good condition. Watered, house, by well; barns, by reservoir, and fields, by stream. Occupied by owner. Reason for selling, to settle an estate. Price, \$22,000. Terms, reasonable. Address Mrs. Cora B. Killmer, owner, Amenia, N. Y.

TOWN OF PINE PLAINS

Population 1,387

No. 190.—Farm of 585 acres; located 1 mile from Pine Plains P. O.; $\frac{1}{4}$ mile from railway station at Briar Cliff on line of C. N. E. R. R.; 1 mile from school and churches; 1 mile from butter and cheese factory; $\frac{1}{4}$ mile from milk station. General surface of farm, level. Altitude, 300 feet. Acres can be used as meadow, 486; in timber, 100, pine and hardwood. Acres tillable, 486. Fruit, apples, pears and cherries. Adapted to general farming. Fences, wire, fine condition. House, 40x30 with extensions, 15 rooms; 3 tenant houses, fair size, 2 stories; 4 large barns. Houses and barns watered by springs. Lake Stissing on property. Property runs to top of Mt. Stissing. Occupied by tenant. Reason for selling, to settle estate. Price, \$50 per acre. Heirs of Charles C. More estate, care Frederick R. Keator, attorney, 22 Exchange place, New York City.

TOWN OF PLEASANT VALLEY

Population 1,332

No. 191.—Farm of 77 acres; located $\frac{1}{8}$ mile from Pleasant Valley P. O.; $\frac{1}{16}$ mile from railway station, at Pleasant Valley, on line of C. N. E. R. R.; $\frac{1}{2}$ mile from school; very short distance from churches and $\frac{1}{16}$ mile from milk station. Highways, state road. Nearest city, Poughkeepsie, population 32,714, 7 miles distant. General surface of farm, rolling. Nature of soil, lime stone. Acres that can be used as meadow, 50. Acres tillable, 60. Adapted to all crops. Fences, stone wall. House,

2 stories, good condition. Good barn with basement. Watered, house, by well and cistern; barns, by cistern. Occupied by owner. Price, \$6,000. Address Isaac J. Noxon, owner, Pleasant Valley, N. Y.

TOWN OF RED HOOK

Population 3,803

No. 192.—Farm of 108 acres; located 1 mile from P. O.; $\frac{1}{2}$ mile from railway station, on line of C. N. E. R. R.; 1 mile from school and churches; $\frac{1}{2}$ mile from butter factory and milk station. General surface, mostly level. Nature of soil, gravel loam. Acres that can be used as meadow, 15; in timber, 8, mostly white oak. Acres tillable, 100. Fruit, apples, pears, etc. Fences, stone and wire. House, frame, 30x40, in good condition. Barn, 40x52, with basement; shed, 20x40; hay barn, 20x28; poultry house, 11x28; hog house, 14x21; creamery; ice house; shop, 24x18; new sheds, 38x18 and 30x20; 2 violet houses. Watered, house, by well; fields, by ponds. Occupied by owner. Reason for selling, wish to retire. Price, \$9,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address Julius Moul, owner, Red Hook, N. Y. Will rent.

TOWN OF RHINEBECK

Population 3,483

No. 193.—Farm of 125 acres; located 2 miles from Rhinebeck P. O., R. D. No. 49, and railway station on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches. Highways, state road. General surface, hilly, rolling and level. Altitude, 600 feet. Nature of soil, loam and muck. Acres that can be used as meadow, 100; in timber, 10, maple, chestnut, oak and hemlock. Acres tillable, 100. Fruit, 100 Baldwins, 80 Newtons, 15 Northern Spies, 30 other varieties of apples; 20 cherry, 80 pear trees, small fruit. Adapted to grain and hay. Fences stone wall with top rail, good condition. House, 10 rooms, with modern improvements. Outbuildings: barn 40x40; carriage house and stables 30x40; cattle barn 30x75, with concrete floor; poultry house; granary and hog house. All painted and in good condition. House and barn watered by city water, fields, by springs and stream. Occupied by caretaker, possession given at any time. Reason for selling, owner in other business. Price, \$20,000. Terms, one-half

FIG. 27.— VIEWS ON FARM NO. 170, TOWN OF ANDES, DELAWARE COUNTY.

cash, balance on mortgage at 6%. Free unlimited water rights belong to place. Address, S. W. Vanderbeck, owner, Manhasset, Nassau Co., L. I., N. Y.

TOWN OF UNION VALE

Population 1,149

No. 194.— Farm of 158 acres; located 2 miles from Moores Mills P. O., R. D. 25; $2\frac{1}{2}$ miles from Verbank railway station on line of Central New England R. R.; 2 miles from school; $1\frac{1}{2}$ miles from churches; $2\frac{1}{2}$ miles from milk station. Highways, hilly. Nearest city, Poughkeepsie, population 32,714, $12\frac{1}{2}$ miles distant. General surface, level and rolling. Acres in meadow, 75; in pasture, 60; in timber, 10. Acres tillable, 100. Fruit, apples, cherries, etc., for family use. Best adapted to hay, corn and potatoes. Fences, wire and stone wall. House, 10 rooms, new. Large new barn, silo and ice house. House and barn watered by well and springs; fields, by springs. Reason for selling, in other business. Price, \$9,000. Terms, $\frac{1}{2}$ cash, balance on mortgage.

Address James Mateer, owner, Verbank, N. Y. Will rent with option to buy.

No. 195.— Farm of 33 acres; located 1 mile from Moores Mills P. O. and railway station, on line of C. N. E. R. R.; 1 mile from school; $\frac{3}{4}$ mile from churches; 4 miles from cheese factory and $2\frac{1}{2}$ miles from condensing plant. Highways, hilly, fair condition. Nearest city, Poughkeepsie, population 32,714, $12\frac{1}{2}$ miles distant, reached by rail and highway. General surface of farm, rolling. Acres that can be used as meadow, 25; in natural pasture, 50. Acres tillable, 25. Fruit, apple, pear and cherry trees, some small fruit. Best adapted to corn, potatoes and oats. Fences, stone wall and wire. House, small, good condition. Barn, fair size, fair condition. House watered by well, fields, by spring and creek. Occupied by tenant. Reason for selling, owner too far away to attend to same. Price, \$2,000. Terms, \$800 cash, balance on mortgage. Owner will rent for \$90 per year. Address P. B. Collins, owner, Central Islip, Long Island, N. Y.

ERIE COUNTY

Area, 1,171 square miles. Population, 571,897. Annual precipitation, 33.51 inches. Annual mean temperature, 49.7°. Number of farms, 8,178. County seat, Buffalo.

This county lies at the west end of the state on Lake Erie and Niagara river and is one of the larger counties both in area and population.

Its surface is level in the north, rolling in the center and hilly in the south. A region of level country of considerable extent lies along the Tonawanda creek and occupies the greater part of the northern tier of towns. The soil of the northern part of the county is generally a clay loam interspersed with beds of marl and muck; farther south is found a clay gravelly loam resting upon limestone, and the southern hills are covered with drift consisting of clay and gravel. The soil of the valleys is generally of gravelly loam and alluvium. The principal pursuits are grain raising and dairying, the southern hill regions being well adapted to grazing and stock raising. It is also a strong fruit county and ranks high in the production of orchard and vineyard products. Buffalo, a city of 454,630 population, affords an unlimited market close at hand. From this city, the western terminal of the barge canal, reaching from the Hudson river to Lake Erie, an enormous commercial business is carried on by way of the lake to the towns along its shore.

The principal crops are as follows: Corn, 588,563 bushels; oats, 1,384,876 bushels; wheat, 355,870 bushels; buckwheat, 169,673 bushels; potatoes, 3,014,450 bushels; hay and forage, 207,202 tons. The value of all farm property is \$63,808,399, an increase of 23.7 per cent. The average price per acre of farm land, including buildings, is \$95.40. Much of the land is of high valuation because of its adaptability to truck gardening and the splendid orchards of apples, pears, peaches, plums, etc. Aside from these products there were produced 24,470,712 gallons of milk, the receipts from the sale of dairy products being \$2,323,714. There are 259 district schools and these schools and the many high schools of the county are all up to the high standard required by the state. Churches of all denominations are scattered throughout the rural sections. The county has nineteen agricultural organizations for the purpose of conserving some one or more interests in agriculture. Thirty-six dairy stations and factories meet the demand of the farmers for milk market. There are 163 miles of state and county roads and 1,680 miles of other improved highways in the county.

TOWN OF AUBORA

Population 5,446

No. 196.— Farm of 100 acres; located 2 miles from East Aurora P. O. and railway station, on line of Pennsylvania R. R.; $\frac{3}{4}$ mile from school; $1\frac{1}{2}$ miles from churches; 2 miles from butter factory and milk station. Highways, state road. Nearest city, Buffalo, population 454,630, reached by rail and highway. General surface, slightly rolling. Altitude, 900 feet. Nature of soil, clay subsoil. Acres that can be used as meadow, 95; in natural pasture, 20; in timber, 3; acres tillable, 95. Fruit, 4 acres of apple orchard, 200 trees; a few each of pear, cherry, plum and small fruit for family use. Best adapted to corn, oats, potatoes and hay. Fences, wire, good condition. House, good, frame, 10 rooms, 20x24, wing, 16x24. Outbuildings, barn, 30x51, ell, 20x65; horse barn, 27x44; poultry, hog, wagon and tool house; granary and 2 silos, 12x28. House and barns watered by wells and springs; fields, by springs. Occupied by owner. Reason for selling, wish to retire. Price, \$10,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address Charles S. Addington, owner, East Aurora, N. Y., R. D.

No. 197.— Farm of 144 acres; located $2\frac{1}{2}$ miles from East Aurora, on line of Pa. R. R.; $\frac{1}{4}$ mile from school; $2\frac{1}{2}$ miles from churches, butter factory and milk station; 2 miles from cheese factory and 5 miles from condensing plant. Highways, good. Nearest large village, East Aurora, population 3,445, $2\frac{1}{2}$ miles distant, reached by highway. General surface, rolling. Nature of soil, gravel and black loam. Acres that can be used as meadow, 110; in natural pasture, 25; in timber, 6, maple, hemlock, ash, beech and iron wood. Acres tillable, 120. Fruit, 275 apple and 50 pear trees. Adapted to corn, potatoes, oats, buckwheat, beans and alfalfa. Fences, barbed wire, in good condition. House, 14 rooms, modern. Large basement barn with running water and other smaller buildings. Watered, house, barn and fields by springs. Occupied by owner. Reason for selling, other business. Price, \$22,000. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address George H. Sweet, East Aurora, N. Y.

TOWN OF ELMA

Population 2,282

No. 199.— Farm of 87 acres; located $2\frac{1}{4}$ miles from East Aurora P. O. and railway station, on line of Pennsylvania

railway; $\frac{3}{4}$ mile from school; 2 miles from churches; $2\frac{1}{2}$ miles from butter factory. Nature of highways, level, chiefly state road. Nearest city, Buffalo, population 454,630, distant 10 miles, reached by rail and highway. General surface of farm, level. Altitude, 900 feet. Nature of soil, loam. Acres that can be used as meadow, 70; in natural pasture, 7; in timber, 10. Fruit, apples and pears. Adapted to corn, hay, grain and potatoes. Fences, barbed wire and rail. House, frame, $1\frac{3}{4}$ stories 3 verandas, cellar. Outbuildings, barn, 100x40, hog house, wagon shed, tenant house in good condition. Watered, house, by 4 good wells; barns by wells, and fields, by springs and brook. Occupied by owner. Reason for selling, advanced age. Price, \$150 per acre. Terms, $\frac{1}{3}$ down, balance on mortgage at 5%. Address B. J. Cole, owner, R. F. D., East Aurora, N. Y.

TOWN OF HAMBURGH

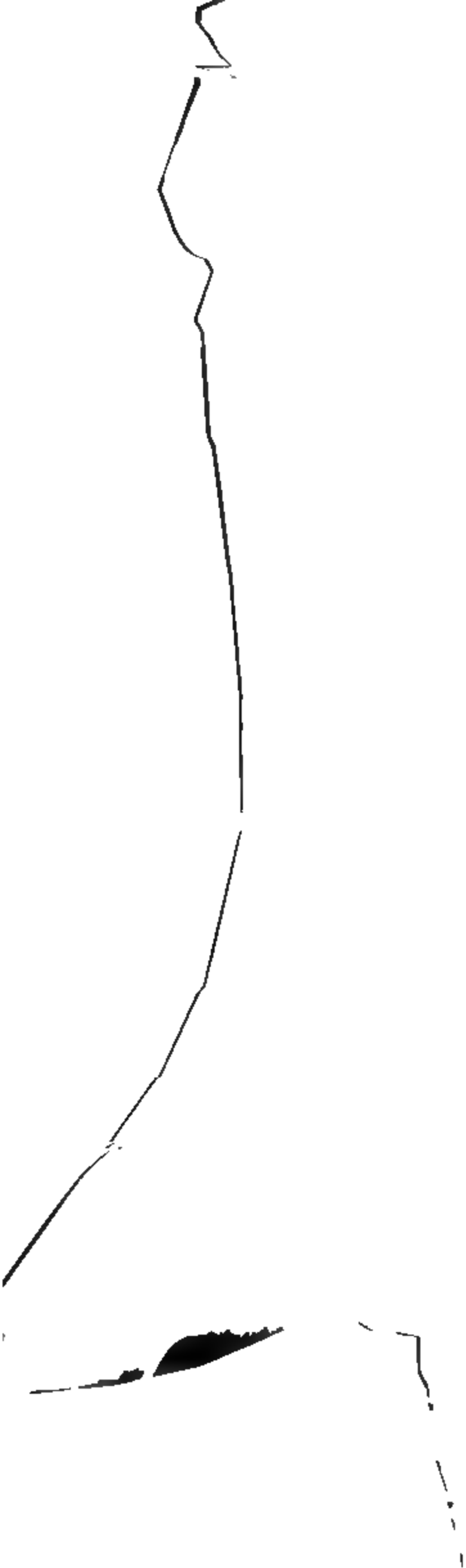
Population 7,374

No. 200.— Farm of 8 acres; located 6 miles from Buffalo; $1\frac{1}{2}$ miles from Orchard Park, on line of B. R. & P. R. R.; $1\frac{1}{2}$ miles from school and churches. Highways, good. Nearest city, Buffalo, population 454,630, 6 miles distant, reached by trolley, rail and highway. General surface, rolling. Nature of soil, sandy loam. Fruit, 75 apple, 100 peach, 65 pear and 10 cherry trees. Best adapted to garden truck. Fences, wire, in good condition. House, 8 rooms. Outbuildings, barn, 8 chicken coops and 3 incubators, all new. Watered, house by well and cistern. Occupied by owner. Reason for selling, death in family. Price, \$7,000. Terms, part cash and remainder on mortgage. Address Gertrude McGill, Buffalo, N. Y., General Delivery.

TOWN OF MARILLA

Population 1,409

No. 201.— Farm of 71 acres; located 1 mile from Marilla P. O. and $4\frac{1}{2}$ miles from railway station, on line of Erie R. R.; 1 mile from school, churches, butter factory and milk station; 2 miles from cheese factory. Highways, good. Nearest city, Buffalo, population 454,630, 14 miles distant. General surface, rolling. Altitude, 800 feet. Nature of soil, gravelly. Acres that can be used as meadow, 55; in natural pasture, 18; in woodland, 8. Acres tillable, 55. Fruit, apple, peach, plum and cherry trees, all kinds of berries for family use.



Adapted to potatoes, corn, beans and grain. Fences, wire and rail. Two frame houses, 18x24, with wings, 16x24 and 14x20; 16x24, with 2 wings 14x20; each of 9 rooms, verandas, cellars. Barns, 26x36, 24x26; 1 with basement; shed, granary, poultry house. Watered, house and barn by well; fields by springs. Occupied by tenant. Price, \$6,000. Terms, \$2,000 cash, balance on mortgage. Address G. H. Foster, owner, Marilla, N. Y.

TOWN OF WALES

Population 1,197

No. 202.— Farm of 60 acres; located 4 miles from South Wales P. O. and 5 miles from railway station at East Aurora, on line of Pennsylvania R. R.; $\frac{1}{2}$ mile from school; 2 miles from churches; 3 miles from butter factory, and $\frac{1}{4}$ mile from milk station. Highways, good.

Nearest city, Buffalo, population 454,630, reached by rail or highway. General surface of farm, rolling. Altitude, 1,000 feet. Nature of soil, yellow loam. Acres that can be used as meadow, 39; in natural pasture, 8; 13 acres woodland. Acres tillable, 47. Fruit, apples, pears, plums, peaches, grapes and currants. Adapted to potatoes, grain and hay. Fences, wire, in good condition. House, frame, 2 stories, 10 rooms; main 18x24, wings, 14x22 and 12x24; veranda, half cemented cellar. Barn, new 34x54 with basement, wagon shed, poultry and hog house in one; silo, round, 12x24. Watered, house, by well; barns, by springs. Occupied by owner. Reason for selling, have larger farm. Price, \$4,200. Terms, $\frac{1}{2}$ cash, balance on mortgage at 5 per cent. Address Will G. Heineman, owner, Wales, R. F. D., N. Y.

ESSEX COUNTY

Area, 1,926 square miles. Population, 32,461. Annual precipitation, 35.41 inches. Annual mean temperature, 46.8°. Number of farms, 2,274. County seat, Elizabethtown.

This county is located in the northeastern part of the state.

It is by far the most broken and mountainous section of the state, with the exception of a strip of land lying along the shore of Lake Champlain. Nearly the whole county is of an Alpine character. Among these mountains are immense beds of magnetic iron ore. Other minerals interesting to science are found in abundance. Lake Champlain and Lake George lie partly in the county. These lakes with the Champlain canal, the Hudson, Saranac and Raquette rivers form a convenient outlet for the large amount of logs, lumber and mineral products of the county. There is also an outlet for everything marketable on the north by the way of the Richelieu and St. Lawrence rivers.

Only about one-third of the area of the county is in farms and only about one-eighth improved farms, yet there is a remarkably good report of agricultural production, showing that the tillable land must be very productive. The average price of improved farm lands, including buildings, is \$24.71 per acre. The leading crops of the county are corn, 96,383 bushels; oats, 222,971 bushels; barley, 9,395 bushels; buckwheat, 25,197 bushels; potatoes, 269,319 bushels; hay and forage, 50,479 tons. The number of domestic animals reported on 2,139 farms are dairy cows, 10,634; horses, 5,907; swine, 4,949; sheep, 19,814; poultry, 61,169. The production of milk was 4,976,712 gallons, the total receipts for the sale of dairy products, \$303,933. There are 164 district schools and the same favorable condition exists in regard to churches of all denominations. There are 14 agricultural organizations in the county all interested in the promotion of agricultural matters. The county has 100 miles of state and county roads and 1,069 miles of other improved highways. A smaller percentage of the farms of Essex county are mortgaged than in any other county of the state.

TOWN OF LEWIS

Population 844

No. 203.— Farm of 137 $\frac{1}{2}$ acres; located 1 $\frac{1}{4}$ miles from Wadhams, on line of D. & H. R. R.; 1 mile from school; 1 $\frac{1}{4}$ miles from churches, and 5 miles from butter factory. Highways, good.

Nearest city, Plattsburg, population 10,134, 37 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, clay and loam. Acres used as meadow, 90; in natural pasture, 47 $\frac{1}{2}$; in timber, 5, elm and other trees. Fruit, apples, pears, plums and currants.

Best adapted to oats, corn and potatoes. Fences, mostly woven wire, in good condition. House, 9 rooms, brick. Outbuildings, barn 30x40, barn 30x50, horse barn, granary, poultry house and ice house. Watered, house and barn, by running spring; fields, by brook. Occupied by tenant. Reason for selling, ill health. Price, \$5,000. Terms, easy. Address Mrs. Hattie E. Robb, Wadhams, N. Y.

No. 204.— Farm of 250 acres; located $3\frac{1}{2}$ miles from Elizabethtown; $11\frac{1}{2}$ miles from Westport, on line of D. & H. R. R.; $\frac{1}{2}$ mile from school; $3\frac{1}{2}$ miles from churches, and $11\frac{1}{2}$ miles from butter factory and milk station. Highways, good. Nearest village, Elizabethtown, population 530, $3\frac{1}{2}$ miles distant, reached by highway. General surface, medium. Nature of soil, loam. Acres that can be used as meadow, 75; in natural pasture, 190; in timber, about 100, pine, oak, maple and hemlock. Acres tillable, 40. Fruit, apple, pear and plum trees. Best adapted to corn, potatoes and oats. Fences, wire and rail, in good condition. House, 11 rooms, new. Outbuildings, 2 barns 24x30; 1 barn 26x30, and 1 barn 30x40. Watered, house, by two wells; barns and fields, by springs. Occupied by owner. Reason for selling, other business. Price, \$1,800. Terms, cash. Address Charles McMurtry, Elizabethtown, N. Y.

TOWN OF MORIAH

Population 6,007

No. 205.— Farm of 260 acres; located $2\frac{1}{4}$ miles from Moriah P. O.; $4\frac{3}{4}$ miles from railway station at Port Henry, on line of D. & H. R. R.; $1\frac{1}{4}$ miles from school; $2\frac{1}{4}$ miles from churches. Highways, good country roads, somewhat hilly. Nearest village, Port Henry, population 2,584, $4\frac{3}{4}$ miles distant, reached by highway. General surface, hilly. Altitude, 1,100 feet. Nature of soil, loam. Acres that can be used as meadow, 150; now used as meadow, 65; in natural pasture, 100; in timber, 70, maple, beech, birch, spruce, cedar, etc. Acres tillable, 150. Fruit, 50 apple, 4 pear and 2 cherry trees. Adapted to hay, oats, corn, potatoes, etc. Fences, woven wire, stone wall and rail. Large house, good condition. Outbuildings, 2 large barns, with basement, hog house, ice house and silo. Watered, house, by spring; barns, same. Occupied by tenant. Reason for selling, old age. Price, \$6,000. Terms, \$2,500 cash, balance on mortgage. Price includes stock and machinery and $\frac{1}{2}$ of all crops on hand. Address G. S. Kidder, owner, Port Henry, N. Y.

FRANKLIN COUNTY

Area, 1,718 square miles. Population, 46,181. Annual precipitation, 37.16 inches. Annual mean temperature, 43.3°. Number of farms, 3,675. County seat, Malone.

This county ranks fourth in land area, and is situated on the north line of the state bordering on Canada.

Its surface is mostly level in the northern part, undulating and rolling in the center and broken and mountainous in the eastern portion. There are many streams in the northern part of the county affording abundance of water for the farming section and in the southern and mountainous portion of the county is a large number of lakes, some of them several miles in extent. Dairying is carried on to a large extent in the northern part. There is a large amount of timber in the central and southern portions. The farm valuation is placed at \$17,571,227, a gain of 37.5 per cent over that of 1900. The average price per acre of improved farm land including buildings is \$32.50. The principal crops raised are corn, 144,646 bushels; oats, 756,302 bushels; wheat, 10,142 bushels; barley, 62,709 bushels; potatoes, 1,433,761 bushels; hay and forage, 107,630 tons. The county ranks high in the production of barley and potatoes. The number of domestic animals reported are as follows: Dairy cows, 28,964; horses, 9,262; swine, 12,893; sheep, 5,233; poultry, 98,495; milk production, 12,715,196 gallons and total receipts from dairy products, \$1,135,644. There are 99 district schools, many churches of all denominations and 14 agricultural organizations, one dairymen's association, one agricultural society and one county fair association. This county has 40 dairy stations and factories. The hardier kinds of apples are grown in abundance and the fruits are easily cultivated. There are ample facilities for marketing. The St. Regis Indians have a reservation of 24,000 acres in the northwest corner of the county.

FIG. 29.— BUILDINGS ON FARM NO. 184, TOWN OF HYDE PARK, DUTCHESS
COUNTY.

TOWN OF BANGOR

Population 2,179

No. 206.— Farm of 48½ acres; located 2½ miles from West Bangor P. O., R. D. No. 2; 7 miles from railway station at North Bangor, on line of Rutland R. R.; 1½ miles from school; 2½ miles from churches and 6 miles from condensing plant. Highways, good. Nearest village, Malone, population 7,404, 10 miles distant, reached by highway. General surface, level. Nature of soil, heavy. Acres that can be used as meadow, 25; in natural pasture, 23. Acres tillable, 20. Fruit, 20 apple trees. Adapted to grain, corn, hay and potatoes. Fences, mostly woven wire. House, 22x52, with wood shed attached. Outbuildings, barn 90x36, also silo. House watered by well; barns, by well; fields, by spring. Reason for selling, other business. Price, \$2,600. Terms, \$500 cash, balance on mortgage; easy. Good poultry house 20x50, concrete floor and large yard. Address Mrs. Lizzie Hutchins, owner, North Bangor, N. Y.

TOWN OF BRANDON

Population 860

No. 207.— Farm of 53 acres; located 1½ miles from Skerry P. O., R. D. 4; 7 miles from railway station at Bangor, on line of Rutland Ry.; 1 mile from school and church; 1½ miles from butter factory and milk station; 4½ miles from cheese factory; 6½ miles from milk condensing plant. Highways, in good condition. Nearest large village, Malone, population 7,404, 9 miles distant, reached by highway. Soil, loam. Acres that can be used as meadow, 28; in natural pasture, 30; in

timber, 5. Acres tillable, 18. Eighteen apple trees. Best adapted to corn, potatoes and hay. Fences, wire, good condition. House, 16x24, ell, 12x16, ell, 16x16, good condition. Outbuildings, barn 24x26, with lean-to, 16x24; poultry house, 12x25, new. Watered, house and barn, by well; fields, by Little Salmon river. Occupied by owner. Price, \$1,500. Terms, one-half down, balance on time. Address Jas. Whitcomb, owner, North Bangor, N. Y., R. D. 4.

TOWN OF MOIRA

Population 2,413

No. 208.— Farm of 700 acres; located ½ mile from Moira P. O.; ¾ mile from railway station at Moira, on line of Rutland R. R.; ½ mile from school, churches and milk station; 2 miles from butter factory. Highways, new state road. Surface of farm, ½ rolling, ½ river bottom flats, overflowed annually. Altitude, about 600 feet. Soil, good, lime uplands, clay river bottom. Acres in timber, 60. Acres tillable, 350. Adapted to any crops grown in this climate. Fences, good. Large house, good condition. Outbuildings, large and in good condition. Watered by well and brook. A costly stone residence in the village would be sold with or without the farm and two together would make a fine country seat and fancy stock farm for wealthy gentleman. Occupied by tenant. Reason for selling, ill health. Price, \$35,000. Terms, \$15,000 down, balance on easy payments. Price includes 70 head of cattle, but not stone residence in village. Address Wm. S. Lawrence, owner, Moira, N. Y.

FULTON COUNTY

Area, 544 square miles. Population, 45,625. Annual precipitation, 50.62 inches. Annual mean temperature, 46.1°. Number of farms, 1,932. County seat, Johnstown.

Located north of the Mohawk river, 45 miles west from Albany.

Its surface features are a rolling and hilly upland in the southern portion rising into a mountainous region in the north. In this part of the county are a large number of lakes forming a characteristic feature of the entire wilderness region of northern New York. The soil in the southern part and along the valleys is mostly a gravelly clay loam and is well adapted to pasturage and dairying, and in the more favorable localities produces excellent crops of grain. Manufacturing is carried on to a large extent, especially in gloves and mittens. More of these commodities are manufactured in Gloversville, Johnstown and the vicinity than are made in all the remainder of the United States. In the northern portion of the county are large tracts of fine timber chiefly owned by the state, though, as in other mountain counties, private parties have holdings. There are ample facilities for marketing all manufactured and agricultural products. The total valuation of farm property is

\$6,808,265. The average price of farm lands per acre including buildings is \$25.30. These figures show a slight increase in value over that given in 1900. principal crops are corn, 121,209 bushels; oats, 218,517 bushels; buckwheat, 44,879 bushels; potatoes, 271,868 bushels; hay and forage, 50,479 tons. The number of farms reporting domestic animals is 1,741; dairy cows, 9,835; horses, 4,064; swine, 4,344; poultry, 67,193; milk produced, 4,533,935 gallons. Receipts from the sale of dairy products, \$383,131. There are nine milk stations and factories in the county. In the lower portion considerable quantities of apples and small fruits are raised. There are 99 district schools and five agricultural organizations. In the larger villages are high schools and academies. The county is noted for its salubrious climate and is the location to which a large summer population go. Sacandaga Park located on the river bearing its name is a noted summer resort.

TOWN OF BROADALBIN

Population 1,845

No. 209.—Farm of 116 acres; $\frac{1}{2}$ mile from Union Mills P. O.; 3 miles from Broadalbin, on line of F., J. & G. Ry.; $\frac{1}{2}$ mile from school and churches; 3 miles from butter and cheese factory. Soil, sandy loam, adapted to general farming. Acres that can be used as meadow, 50. Acres tillable, 70. Watered by good springs. Reason for selling, old age. Price, \$600. Address David Blair, owner, Broadalbin, N. Y. Will rent.

No. 210.—Farm of 40 acres; located $\frac{3}{4}$ mile from Broadalbin P. O., R. D. 1; $\frac{1}{2}$ mile from railway station at Broadalbin, on line of F., J. & G. R. R.; 1 mile from school; $\frac{3}{4}$ mile from churches; 1 mile from cheese factory. Highway, good, level. General surface, level. Acres in meadow, 20; in timber, 20, butternut and hardwoods. Acres tillable, all. Adapted to general farm crops. Fences, wire, good. House, large, 2 stories, needs painting. Outbuildings, 3 large barns, poultry house, hog house and corn house, nearly new. House and barns watered by two good wells, fields by creek. Occupied by owner. Reason for selling, ill health. Price, \$3,000. Terms, \$2,000 cash, balance easy. Will include 8 acres of timber land at same price, if desired. Address Marvin W. Clifford, owner, Broadalbin, N. Y., R. D. No. 1, box 105.

No. 211.—Farm of 125 acres; located 1 mile from Benedict P. O.; 6 miles from railway station at Broadalbin, on line of F., J. & G. R. R.; 1 mile from school; 2 miles from churches; 6 miles from butter factory and milk station. Highways, good country roads, not very hilly. General surface of farm, level. Altitude, 800 feet. Nature of soil, dark rich loam. Acres that can be used as

meadow, 75; in natural pasture, 25; in timber, 25, oak, birch, butternut and elm. Acres tillable, 75. Best adapted to potatoes, corn, buckwheat and oats. Fences, wire, good condition. House, good farm house, $1\frac{1}{2}$ stories, 10 rooms, good cellar. Outbuildings, fair barn, poultry house, shed, etc. Watered, house, by well. Occupied by owner. Reason for selling, ill health. Price, \$2,250. Terms, reasonable. Address Anna M. Orton, owner, Northampton, N. Y. Will rent with option to buy.

TOWN OF NORTHAMPTON

Population 2,231

No. 212.—Farm of 70 acres; $1\frac{1}{2}$ miles from P. O. at Northville, on line of F., J. & G. Ry.; $\frac{1}{2}$ mile from school and churches. Good sandy loam soil. Ten acres timber; balance meadow and pasture. Acres tillable, 50. Fences, mostly wire. Young apple trees in bearing and small fruits, also some plums, cherries and pears. House, 36x26, with large wing; piazza on front and one end; all in fairly good condition; well shaded by maples. Barns, 35x45 and 26x36. Water at house and barn. This farm would make an ideal summer boarding house or summer home. Occupied by owner. Reason for selling, ill health. Price, \$1,800. Terms, \$1,000 cash, balance on mortgage. Name and address of owner, M. B. Merrill, Northville, N. Y.

No. 213.—Farm of 375 acres; located $\frac{1}{4}$ mile from Cranberry Creek P. O.; 5 minutes' walk from railway station, on line of F., J. & G. R. R.; $\frac{1}{4}$ mile from school and churches. Highways, good. Nearest city, Gloversville, population 21,178, 10 miles distant, reached by rail and state road. General surface of farm, level. Altitude, 700 feet. Soil, loam. Acres that can be used as meadow, 100; in natural pasture, 75; in timber, 200,

soft wood, poplar, beech and birch. Acres tillable, 175. Best adapted to hay, grain and potatoes. Fences, wire, good condition. Ten-room house, in fair condition. Outbuildings: 4 barns, 70x40, 51x37, 40x30 and 34x18, fair condition, with good basements. House lighted by electricity. House, watered by well and cistern, barns by large spring in basement and fields by creeks. Foothills of Adirondacks, 1 mile distant. Occupied by tenant. Reason for selling, to settle estate. Price, \$6,000. Terms, \$2,500 cash, balance on mortgage. Address Mary A. Gilbert, owner, Mayfield, N. Y.

TOWN OF OPPENHEIM

Population 1,161

No. 214.— Farm of 200 acres; located 3 miles from Dolgeville P. O., R. D. No. 1, and railway station, on line of Little Falls & Dolgeville R. R.; $\frac{1}{4}$ mile from

school; 1 mile from church and cheese factory; 3 miles from butter factory and milk station, and 6 miles from condensing plant. General surface of farm, rolling. Altitude, 1,075 feet. Soil, loam. Acres that can be used as meadow, 120; in natural pasture, 60; in timber, 50, hard and soft. Acres tillable, 120. Fruit, 50 apple trees, some strawberries. Adapted to corn, wheat, oats and potatoes. Fences, wire, all in good condition. House, 40x30, good condition, newly painted. Outbuildings: main barn with basement, 40x50; wagon house, 12x30, and new wood shed, wagon house, 30x40. House watered by well and cistern, barns by well, and fields by springs and creek. Occupied by owner. Reason for selling, other business. Price, \$2,500. Terms, \$500 cash, balance on mortgage. Address John A. Cross, owner, Dolgeville, N. Y.

GENESEE COUNTY

Area, 507 square miles. Population, 40,707. Annual precipitation, 34 inches. Annual mean temperature, 50°. Number of farms, 3,250. County seat, Batavia.

Located in the upper western part of the state.

The surface is mostly level or gently rolling and undulating. The southern part is occupied by ranges of hills, which have an elevation of 200 or 300 feet above the valley. A limestone terrace extends east and west through the county and building stone is extensively obtained from the outcropping ledges of this terrace. The surface is generally covered with a thick drift deposit and the underlying rocks only appear in the ravines of the streams. Nearly all the swamps contain thick deposits of muck and marl, furnishing in abundance the element for future fertility. The soil of the county is generally a very deep and fertile sandy or gravelly loam, intermixed with clay. This county embraces a portion of the celebrated "Genesee Country," which from the first settlement has been famed for its fertility. For many years wheat formed the staple product, but since the opening of the wheat lands of the west this product has gradually given way to a more profitable production of fruit and dairying. The county is well watered and its products find ready sale in the enormous markets that are within short shipping distance over railroads and trolley lines that traverse the county in every direction. The value of farm land including buildings is \$25,044,508. The average price per acre of farm property is \$71.43; twelve years ago it was \$40.41, showing that farm property in this county has almost doubled in value within the past ten years. The principal crops are corn, 388,719 bushels; oats, 698,648 bushels; wheat, 708,786 bushels; barley, 56,997 bushels; dry beans, 234,101 bushels; rye, 16,778 bushels; potatoes, 1,217,790 bushels; hay and forage, 92,123 tons. There are 3,052 farms reporting domestic animals, dairy cows, 13,768; horses, 12,988; swine, 12,770; sheep, 38,916; poultry, 166,902; milk from dairies, 6,897,768 gallons, and the total receipts from the sale of dairy products, \$592,060. There are 124 district schools, graded schools, academies and union schools located in many of the towns. There are 15 agricultural organizations whose purpose is to conserve the interest of the farmer. Land values in this county are increasing very rapidly.

TOWN OF ALEXANDER

Population 1,403

No. 215.— Farm of 120 acres; located 2 miles from Alexander P. O., R. D. No. 1; $1\frac{3}{4}$ miles from railway station at

Linden, on line of Erie R. R. Milk collected at door. One mile from school; $1\frac{3}{4}$ miles from milk station and milk condensing plant; 2 miles from cheese factory and churches. Highways, in

good condition. This farm is 8 miles from Batavia, population 13,278, reached by rail and highway. Surface of farm, part rolling, balance level. Soil, loam, gravel, black, slate, etc. Acres in meadow, 36; in natural pasture, 30; in timber, 3, maple, good. All tillable except 10 acres. Fruit, about 6 acres of apple orchard; large quantity of fruit for family use, such as pears, plums, cherries, berries, etc. Adapted to general farming. Fences, wire, good condition. House, 13 rooms, good, except wood house needs slight repairs. Outbuildings, 1 gambrel roof barn, 1 horse barn, granary, tool sheds, etc., all in fair condition. Watered by well, cistern, springs and brooks. Occupied by owner. Reason for selling, ill health of owner. Price, \$9,500. Terms, cash. Will include 2 horses, 4 cows and crops in storage. Address John Triftshauser, Alexander, N. Y.

TOWN OF BETHANY

Population 1,394

No. 216.—Farm of 189 acres; located 3 miles from Linden P. O., R. D. No. 22, and railway station, on line of Erie R. R.; 40 rods from school and church; 6 miles from butter factory; 5 miles from cheese factory and 3 miles from milk station. Highways, good. Nearest city, Batavia, population 13,278, 7½ miles distant, reached by highway. General surface of farm, mostly rolling, some hilly. Altitude, 700 feet. Nature of soil, clay loam. Acres that can be used as meadow, 92; in natural pasture, 34; in timber, 3, hard wood, fair. Acres tillable, 92. Fruit, 55 acres of apples and 5 acres of Bartlett pears. Adapted to fruit, grain, beans, alfalfa and potatoes. Fences, wire, good. House, 10 rooms, fair condition. Outbuildings, horse barn, good, room for 14 horses; sheep barn, room for 1,500 sheep; tool shed, pig house and poultry house, in fair condition. Watered, house, by well and pump station; barns, pump station, and fields by springs and creek. Occupied by owner's son. Reason for selling, death of owner. Price, \$150 per acre. Terms, ½ cash, balance mortgage at reasonable rate of interest. Address W. A. Page, owner, Linden, N. Y.

TOWN OF DARIEN

Population 2,013.

No. 217.—Farm of 130 acres; located ¾ mile from Darien Center P. O.; 1¼ miles from railway station on line of

Erie R. R.; ¾ mile from school and churches, and 1¼ miles from milk station. Highways, state road. Nearest city Batavia, population 13,278, 16 miles distant, reached by rail or highway. General surface of farm a little rolling. Nature of soil, loam, clay subsoil. Acres that can be used as meadow, 110; in natural pasture, 20; in timber, 6, sugar maple, beech and basswood. Acres tillable, 110. Fruit, 2 acres of apple orchard. Adapted to corn, wheat, potatoes, beans and alfalfa. Fences, wire, good condition. House, 10 rooms, modern gothic, good condition. Outbuildings, new barn 36x62, with gambrel roof, concrete floor, 20 swing stanchions, water in barn, built in 1912; large new silo, new barn 26x36, barn 26x40. House watered by well, barns by well and fields by spring. Occupied by tenant. Price, \$9,000. Terms, \$2,000 cash, balance on mortgage. Address F. J. Corp, owner, Batavia, N. Y.

No. 218.—Farm of 165 acres; located ¼ mile from Darien P. O., R. D. 14; ¾ mile from railway station at Darien Center, on line of Erie R. R.; ½ mile from school and churches; 7 miles from butter factory; 3 miles from cheese factory; ¾ mile from milk station. Highways in good condition. Nearest city, Batavia, 14 miles distant, population 13,278, reached by rail and highway. Surface of farm, slightly rolling. Soil, gravel loam. Acres that can be used as meadow, 125; in natural pasture, 15; in timber, 25, maple, fine sugar bush. Acres tillable, 125. Fruit, about 130 trees, apples, pears, cherries, plums, peaches and grapes. Adapted to alfalfa, corn, wheat, potatoes and cabbage. Fences, wire, in good condition. House, new, 12 rooms; also 6-room tenant house, good condition. Outbuildings: barn, 40x70; barn, 28x48; ice house, all in good condition. Watered, house by well, barns by hydraulic ram, fields by springs. Occupied by owner and tenant. Reason for selling, ill health of owner. Price, \$20,000. Terms, \$8,000 down, balance on mortgage. Fine fish pond on farm close to house. Address James C. Lathrop, owner, Darien Center, N. Y.

No. 219.—Farm of 118 acres; located 2 miles from P. O., R. D. No. 4, and railway station at Griswold, on line of Erie R. R.; 1½ miles from school and church; 3 miles from butter factory,

FIG. 30.— HOUSE ON FARM NO. 201, TOWN OF MARILLA, ERIE COUNTY.

FIG. 31.— HOUSE ON FARM NO. 229, TOWN OF DURHAM, GREENE COUNTY.



and 2 miles from milk station. Highways, good. Nearest village, Attica, population 2,013, 3 miles distant, reached by rail and highway. General surface of farm, mostly level, slightly rolling. Nature of soil, gravelly loam, clay subsoil. Fruit, 10 acres of apple trees. Best adapted to oats, corn and beans. Fences, wire, good condition. Ten-room brick house, fair condition. Main barn, 32x64, ell, 30 feet square, fair condition. Watered, house, by good well; barns, by well, and fields by good springs. Occupied by tenant. Reason for selling, old age. Price, \$60 per acre. Terms, easy. Will sell adjoining 60 acres. Address James A. Pettibone, owner, Attica, N. Y., Box 300.

TOWN OF PEMBROKE

Population 2,473

No. 220.— Farm of 96 acres; located $1\frac{1}{4}$ miles from East Pembroke P. O. and 1 mile from railway station at West Batavia on N. Y. C. R. R.; $1\frac{1}{4}$

miles from high school, milk station and churches. Highway, state road and brick. Nearest city, Batavia, population 13,278, 6 miles distant. General surface, mostly level. Altitude, 875 feet. Nature of soil, gravel loam. Acres in meadow, 10; in natural pasture, 15; in timber, 10. Acres tillable, 60. Fruit, 2 acres of apple orchard, fall and winter, 2 pear and 2 plum trees, currants and berries. Best adapted to grain, beans and potatoes. Fences, wire in good condition. Two-story frame house, 10 rooms, good cellar and veranda. Outbuildings: barn 30x70, with basement. hen house, hog house and granary. House and barn watered by two wells. 26 miles from Lake Ontario. Occupied by owner. Reason for selling, want smaller farm. Price, \$6,500. Terms, \$3,700 cash, balance at 6 per cent. There are 5 acres of black muck on this farm. Address Stewart Warren, owner, East Pembroke, N. Y., R. D.

GREENE COUNTY

Area, 600 square miles. Population, 30,091. Annual precipitation, 42.7 inches. Annual mean temperature, 47.7°. Number of farms, 2,654. County seat, Catskill.

Located in the southeastern part of the state, bounded on the east by the Hudson river.

The surface is rugged and diversified, with the picturesque scenery of the Catskill mountains. A large part of the county is covered with forests. The mountains of Greene county lie in four groups which slope from every side into fertile valleys. Clay loam with occasional deposits of gravel characterize the farming portion of the county. There are also soils of limestone formation. The county is traversed by the West Shore and the Kaaterskill, Stony Clove and Catskill railroads. During the summer months thousands of tourists and summer residents visit this wonderful region, giving the farmers a ready market for all their farm produce in their home town. While not excelling in any particular crop the yield of the staples is very good: corn, 189,104 bushels; oats, 207,583 bushels; buckwheat, 92,452 bushels; rye, 58,468 bushels; potatoes, 160,133 bushels; hay and forage, 62,748 tons. The domestic animals are reported as follows: Dairy cows, 15,423; horses, 6,174; swine, 8,245; sheep, 9,708; poultry, 124,075. Average value of farm land, \$17.44 per acre and of improved land, \$37.93 per acre. Amount of milk produced, 7,588,116 gallons and the total receipts from dairy products of the eight milk stations in the county, \$711,998. There are 144 district schools in the county and an academy at Catskill; also seven agricultural organizations to promote the farmers' interest. The state has recently bought about 100,000 acres in order to preserve the natural beauty of this historic region.

No. 222.— Farm of 64 acres; located 2 miles from Athens P. O., R. D. No. 1; $\frac{1}{4}$ mile from railway station at West Athens, on line of W. S. R. R.; $\frac{1}{2}$ mile from school, and 2 miles from churches. Highways, good. Nearest city, Hudson, population 11,544, 2 miles distant, reached by highway. General surface of farm, slightly rolling. Nature of soil, mostly black loam. Acres in timber, 1, firewood. Acres tillable, 63.

Fruit, 600 pear, 125 apple, 70 plum and 35 cherry trees, all bearing and all varieties. Adapted to all crops. Fences, fair. House, 8 rooms, good, some papering needed. Outbuildings, poultry house, 11x9; extra 2-story barn, 12x18; all buildings good; cow barn, 2 stories, 17x63; horse barn, 13x22; carriage house, 6x26, and pig house, 16x27. Watered, house, by well and cistern; barns, by well, and fields by 5 springs.

Hudson river, 2 miles distant. Occupied by owner. Reason for selling, ill health. Price, \$4,600. Terms, \$1,200 cash, balance on mortgage at 5 per cent. Will only sell at above price before crops are put in. Address A. Livingston, owner, Athens, N. Y.

No. 223.—Farm of 65 acres; $\frac{3}{4}$ mile from railway station at West Athens, on line of W. S. R. R.; 1 mile from school, churches and milk station. Highways, good. General surface of farm, rolling. Nature of soil, loam, good. Acres that can be used as meadow, 57; natural pasture, 6. Fruit, 450 pear, 50 apple and 100 cherry trees. Best adapted to fruit, hay and grain. House, 12 rooms, in good condition. Outbuildings, 2 large barns, wagon house, pig pen and 3 poultry houses. Watered, house, by well and cistern; barns, by cistern, and fields by springs. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms, \$3,000 cash, balance on mortgage. Address Levi J. Perry, owner, Athens, N. Y., R. D. 1.

No. 224.—Farm of 102 acres; located 2 miles from Catskill P. O., R. D. No. 2, and $2\frac{1}{4}$ miles from railway station, on line of W. S. R. R.; $\frac{1}{4}$ mile from school and 2 miles from churches. Highways, 2 miles from state road, but have good roads kept by the town. General surface of farm, level. Nature of soil, flat land is black soil, the rolling, gravelly. Acres that can be used as meadow, 60; in natural pasture, 8; in timber, 8, hard wood. Acres tillable, 80. Fruit, 300 apple, 1,000 pear and some cherry and peach trees. Best adapted to hay and grains. Fences, wire and stone. House, 14 rooms, good condition. One hundred-foot barn, convenient and roomy; all other necessary buildings in good shape. Watered, house, by well and cistern; barns, by cistern, and fields by natural springs. Hudson river about $2\frac{1}{2}$ miles distant. Occupied by owner. Reason for selling, to settle an estate. Price, \$8,000. Terms, cash or half payment, with good security for balance. Address Mrs. Annie Clow, owner Catskill, N. Y.

TOWN OF CAIRO

Population 1,367

No. 225.—Farm of 87 acres; located $2\frac{1}{2}$ miles from Freehold P. O., R. D. No. 2; $2\frac{1}{2}$ miles from railway station at Cairo, on line of C. M. R. R.; $\frac{1}{2}$ mile from school; $2\frac{1}{2}$ miles from

churches. Highways, good, some hills. Nearest village, Cairo, $2\frac{1}{2}$ miles distant, reached by highway. General surface of farm, rolling, some bottom land. Altitude, 800 feet. Nature of soil, sandy and clay loam. Acres that can be used as meadow, 40; in natural pasture, 15; in timber, 10, hemlock, pine, oak, cedar, hickory and chestnut. Acres tillable, 62. Fruit, 100 apple, 25 pear trees, grapes, cherries and other fruit. Adapted to corn, oats, rye, hay and potatoes. Fences, wire and stone. House, 25x40, 9 rooms, good condition. Outbuildings, barn 30x80, fair condition; good grain house, 14x20. Watered, house, by well and cistern. barns, pond and spring, fields, by Catskill creek and spring. Occupied by owner. Reason for selling, to settle the estate. Price \$40 per acre. Terms: one-half cash, balance on mortgage at 5 per cent. Address, E. Simpkins, administrator, Freehold, N. Y.

TOWN OF COXSACKIE

Population 3,453

No. 226.—Farm of 104 acres; located $2\frac{1}{2}$ miles from Coxsackie; $2\frac{1}{2}$ miles from railway station at West Athens, on line of W. S. R. R.; 1 mile from school; 3 miles from churches. Highways, good and level. Nearest city, Hudson, population 11,544, 5 miles distant, reached by ferry or rail. General surface, part rolling, mostly level. Nature of soil, some gravelly, more clay and black loam. Acres that can be used as meadow, 104. All can be used as pasture. Fruit, 100 apple trees, pears, plums and cherries for family use. Land adapted for all crops. Fences, good condition. 15 room house, good condition. Outbuildings, 2 barns, wagon house, corn house, shed, poultry house and pig pen. Extra large barn in addition. House, barn and fields watered by wells. Occupied by owner. Reason for selling, ill health and unable to care for it. Price, \$5,000. Terms, easy. Address, Charles C. Wolfe, owner, Coxsackie, N. Y., R. D.

No. 227.—Farm of 160 acres; 2 miles from railway station at West Athens, on line of W. S. R. R.; $\frac{1}{4}$ mile from school; $1\frac{1}{2}$ miles from church and 2 miles from milk station. Highways, good, hard dirt roads. Nearest large village Coxsackie, population, 2,309, 4 miles distant, reached by highway.

General surface of farm, level. Altitude, 300 feet. Nature of soil, clay and black loam. Acres that can be used as meadow, 100; in natural pasture, 60; in timber, 20, oak and cedar. Acres tillable, 100. Fruit, 350 apple and 200 pear trees. Best adapted to hay and grain. Fences, wire and board, fairly good. House, 9 rooms, stone, in fair condition. Large barns, good condition, fitted with hay fork, stables for 9 cows and 7 horses. Watered, house, by spring, barns, by creek and fields, by spring. Occupied by owner. Reason for selling, other business. Price, \$6,000. Terms, \$3,000 cash, balance on mortgage. Will rent on shares, owner having control. Price includes 3 horses, 2 cows, 2 heifers, wagons, ploughs, mowers, reapers, etc. Address Mr. Marion Lewis, owner, Valley Falls, N. Y.

No. 228.— Farm of 140 acres; located 3 miles from Cocksackie P. O., R. D. No. 1; $2\frac{1}{2}$ miles from railway station at West Cocksackie, on line of W. S. R. R.; $\frac{1}{4}$ mile from school and 2 miles from churches. Highways, level and good. General surface of farm, level. Altitude, 100 feet. Nature of soil, clay loam. Acres that can be used as meadow, 100; in natural pasture, 24; in timber, 16, red cedar and pine, good quality. Acres tillable, 124. Fruit, 50 apple and 20 pear trees. Adapted to hay, corn, oats, wheat, buckwheat and fruit. House, 10 rooms, good condition. Outbuildings, large new barn, granary, wagon house, hog house, etc. Watered, house by well and cistern, barns, same and fields, by spring in pastures. Occupied by tenant. Reason for selling, other business. Price \$5,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address Mrs. Rachel B. Turpin, owner, Cocksackie, N. Y.

TOWN OF DURHAM

Population 1,363

No. 229.— Farm of 140 acres, 1 mile from Durham P. O., 10 miles from railway station at Cairo on line of Catskill Mountain Ry.; $\frac{3}{4}$ mile from school and churches; 1 mile from butter factory. Highways, good, rolling. Nearest village, Durham, 1 mile distant, reached by highway. Surface of farm, nearly level. Soil, clay loam, fertile. Acres that can be used as meadow, 130; in natural pasture, 85; in timber, 10, hemlock, basswood, elm, hickory and

beech; acres tillable, 130. Fruit, 100 apple and 25 pear trees, variety of plums, some peaches. Adapted to hay, corn and all kinds of grain. Fences, wire and rail, in good condition. House 12 rooms, $1\frac{1}{2}$ stories, first-class condition. Barns: 76x30, with basement and stables for 22 cows, 4 horses, box stall; another, 36x30, with basement. Watered, house, by well and cistern; fields, by springs and brook; barn, by cistern. Catskill Mountains and Berkshire Hills visible from lawn. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$4,500. Terms to suit buyer. Address O. W. More, Durham, N. Y.

No. 230.— Farm of 154 acres; located $1\frac{1}{2}$ miles from station on line of W. S. R. R.; $\frac{1}{2}$ mile from school; $1\frac{1}{2}$ miles from church; 4 miles from butter factory; $1\frac{1}{2}$ miles from milk station; $1\frac{1}{2}$ miles from Norton Hill village and skimming station. Highways, good. Nearest village, Oak Hill, 3 miles distant, reached by highway. Surface, level, sloping slightly to south. Good soil, 50 acres of meadow; 20 acres of natural pasture; 8 acres of timber, white oak and pine; 125 acres tillable; 150 apple and 150 pear trees, all first-class varieties. Land adapted to rye, corn and oats. Fences, of stone and wire, in good condition. Comfortable 12-room house, $1\frac{1}{2}$ stories, 24x36. Good barn, 72x30; sheep house, 52x18; wagon house, 30x24; granary, 20x16; pig pen, 20x16. House has spring water; barns have water in yard; fields have springs. Direct road from Cocksackie to Oak Hill. Occupied by owner. Reason for selling, owner is too old to work farm. Price, \$4,000. Terms, one-half cash, balance on mortgage. Address Mrs. Barton Miller, owner, Norton Hill, N. Y.

TOWN OF GREENVILLE

Population 1,550

No. 231.— Farm of 10 acres; located $1\frac{1}{2}$ miles from Freehold P. O., R. D. No. 2; 3 miles from railway station at Cairo, on line of W. S. R. R.; $1\frac{1}{2}$ miles from school; $1\frac{1}{2}$ miles from church, and 2 miles from butter factory. Highways, good. General surface of farm, level. Nature and quality of soil, rich. Acres in natural pasture, 3. Acres tillable, 7. Fruit, 30 apple, 10 pear, 8 cherry, 3 plum and 3 quince trees. Best

adapted to corn and buckwheat, also good for poultry raising. Fences, stone wall. Large 8-room house, 2 stories, in good condition. Outbuildings: barn, 3 stalls; poultry house which holds 150 chickens; ice house, wood house, all in good condition. House watered by cistern pump and fields by spring. Occupied by owner. Reason for selling, other business. Price, \$2,800. Terms, cash. Address G. L. and Agnes J. Gronlund, owners, Freehold, N. Y.

No. 232.—Farm of 70 acres; located 2 miles from Freehold, 6 miles from railway station at Cairo, on line of C. M. R. R.; 1 mile from school and 2 miles from churches. Highways, good, some hills. Acres in natural pasture, 10; in timber, 12, pine, oak, hickory and maple. Acres tillable, 48. Fruit, 150 apple, 5 pear, 2 cherry and 3 plum trees, also raspberries and strawberries. Adapted to hay, corn, oats, rye and potatoes. Stone and wire fences. House, 30x32, nearly new, 10 rooms. Barn, 40x46, 2 stories, with silo and shed; hog house, 12x24; grain house, 16x20; wagon house, 20x24, all new and painted. House, and barns watered by well; fields, by spring and brook. Near Catskill mountains. Occupied by owner. Reason for selling, other business. Price, \$2,800. Terms, $\frac{1}{3}$ cash, balance on mortgage at 5 per cent. Address, E. Simpkin, owner, Freehold, N. Y. Will rent with option to buy.

No. 233.—Farm of 101 acres; located $2\frac{1}{2}$ miles from Grapeville P. O., R. D. No. 1; 10 miles from railway station at Coxsackie, on line of W. S. R. R., $\frac{1}{2}$ mile from school; $2\frac{1}{2}$ miles from church; 5 miles from butter factory and milk station. Highways, fairly good country road. Nearest city, Albany, population 107,979, 25 miles distant, reached by highway. General surface of farm, rolling. Altitude, 1,000 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 10; in natural pasture, 30; in timber, 7, hemlock, maple, beech and birch. Acres tillable, 54. Fruit, old apple orchard of 35 trees and about 60 young trees coming into bearing. Adapted to all crops. Fences, not very good. House, 11 rooms, 4 of which are 15 feet square, good condition and painted. Outbuildings, 2 barns, poultry house, wagon house, granary, pig pen, wood house, good condition. Watered, house by

well, barns, by spring, and fields by springs. Reason for selling, to settle estate. Price, \$2,500. Terms, cash preferred. Owner will rent with option to buy. Address Miss Edna M. Seaman, owner, New Baltimore Station, N. Y.

TOWN OF NEW BALTIMORE

Population 1,840

No. 234.—Farm of 105 acres; located $1\frac{1}{2}$ miles from Grapeville P. O.; 8 miles from railway station at Coxsackie, on line of W. S. R. R. and Hudson River boats; 1 mile from school; $1\frac{1}{2}$ miles from church; 5 miles from butter factory. Highways, good, partly state road. Nearest large village, Coxsackie, population 2,309, 8 miles distant, reached by highway. Surface of farm, rolling. Soil, good. Acres in meadow, 54; in muck, 5; in natural pasture, 25; in timber, 25, hemlock, pine, chestnut and hard wood; acres tillable, 75. Fruit, 100 apple, a few pear, plum and cherry trees, 25 butternut trees. Adapted to rye, buckwheat, oats, potatoes, hay and fruit. Fences, stone and wire, in fair condition. House, 10 rooms and closet, painted, stone cellar, in fair condition. Barns, ample room, in fair condition. Watered, house, by well; barns, by running water; fields, by springs and creek. Pond of 1 acre, 35 to 40-horsepower. Occupied by owner. Reason for selling, poor health. Price, \$4,500. Terms, two-thirds cash, balance to suit purchaser. Address E. D. Stewart, owner, Urlton, N. Y.

No. 235.—Farm of 110 acres; located 1 mile from Medway P. O.; $4\frac{1}{2}$ miles from railway station at Coxsackie, on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches. Highways, fairly good. General surface, rolling. Altitude, 500 feet. Nature of soil, principally gravelly loam. Acres that can be used as meadow, 60; in natural pasture, 10; in timber, 10, oak, hickory, chestnut, pine, etc. Acres tillable, 90. Fruit, 100 trees, mostly apple. Adapted to rye, buckwheat, oats, corn, hay and wheat. Fences, stone walls, good condition. House, 2 stories, 11 rooms, good, painted inside and out August, 1914. Outbuildings: barn, 34x56, 22 ft. posts; ice house, carriage house and milk room combined. House watered by well and cistern, barns by well, fields by springs. Occupied by owner in summer only. The land is leased by the year

FIG. 32.— HOUSE ON FARM NO. 232, TOWN OF GREENVILLE, GREENE COUNTY.

FIG. 33.— VIEW ON FARM NO. 232, TOWN OF GREENVILLE, GREENE COUNTY.



and is well cultivated. Reason for selling, owner is a widow. Price, \$4,000. Terms, to suit buyer. Address Mrs. Harriet S. Odell, owner, 3301 Barker Ave., Williamsbridge, New York city.

No. 236.— Farm of 120 acres; located 3 miles from West Coxsackie P. O., R. D. No. 1; 3 miles from railway station at Coxsackie, on line of W. S. R. R.; 1 mile from school; 2 miles from churches; 5 miles from butter factory; 3 miles from milk station. Highways, good, a little hilly. Nearest city, Albany, population 107,979, 20 miles distant, reached by rail or highway. General surface of farm, level and some rolling. Nature of soil, black and sandy

loam. Acres in meadow, 25; in natural pasture, 8; in timber, 42, oak. Acres tillable, 80. Fruit, 850 apple trees, all varieties, also pears, etc. Adapted to hay, corn, oats, rye and buckwheat. Fences, stone wall, very good. House, large, 15 rooms, in first-class condition. Outbuildings: large basement barn, sheds attached; 2 poultry houses; 1 hog house; wagon house and granary; new fruit cold storage, will hold 1,000 barrels of apples. House watered by cistern and well, barns by brook and spring and fields by brook. Occupied by owner. Reason for selling, wishes smaller place. Price, \$9,500. Terms, half cash, balance on mortgage. Address Albert R. Hotelling, owner, West Coxsackie, N. Y.

HAMILTON COUNTY

Area, 1,745 square miles. Population, 4,491. Number of farms, 470. County seat, Lake Pleasant.

This county occupies the central portion of the great wilderness region of northeastern New York.

Its surface is rugged, mountainous, rocky and is mostly covered with forests. Massive ranges of mountains cross each other in various directions. Within the valleys, between these mountain ranges are several remarkable chains of lakes, many of them connected by streams affording boat navigation. These lakes are long and narrow, bordered by steep banks and high mountain peaks. The waters are clear, cold and pure and discharge in almost all directions. The entire county is included in what is known as the Adirondack Park which also includes a part of Franklin, St. Lawrence, Essex, Warren and Herkimer counties. The region is much visited by the lover of wild scenery and sportsman and the tourist during the summer months. The region abounds in game and the lakes and streams are well stocked with trout. Peat, iron ore, limestone, sand stone and graphite are found. The number of farms reporting domestic animals is 429, dairy cows, 1,183; horses, 816; swine, 377; sheep, 2,515; poultry, 9,884. These figures show that most of the products raised in this county are for the supply of camps, cottages, hotels, and summer tourists. There were raised however, in the valleys, 3,186 bushels of corn, 8,396 bushels of oats, and 46,324 bushels of potatoes. There is perhaps no locality that is of greater interest to a vast number of people of New York state, as it affords a health and recreation resort of the most useful and beneficial character to the public. It has fewer farms than any other county of the state, and yet the farm property is valued at \$1,653,827.

TOWN OF HOPE

Population 250

No. 237.— Farm of 127 acres; located ½ mile from Hope P. O. and 7 miles from Northville, on line of F. J. & G. R. R.; ¾ mile from school and ¼ mile from churches. Highways, state road. Nearest village, Northville, population 1,635, 7 miles distant, reached by highway. General surface, rolling and level. Nature of soil, sandy loam. Acres that can be used as meadow, 50; in natural pasture, 40; in timber, 37, sugar bush,

etc. Acres tillable, 25. Fruit, 25 apple trees. Adapted to beans, corn, buckwheat, oats and potatoes. Fences, board. House, 26x50, good condition. Outbuildings, 2 barns 26x36; shed, 20x24; poultry house; corn house and hog pen. Watered, house by well; barns, same and fields, by brooks. Sacandaga river bounds farm on west. Adirondack mountains, 35 rods from house. Reason for selling, old age. Price, \$1,900. Terms, ⅓ cash, balance to suit purchaser. Address John A. Willard, owner, Northville, N. Y.

TOWN OF INLET

Population 219

No. 238.—Farm of 4 acres, located $\frac{1}{4}$ mile from Eagle Bay P. O. and railway station on line of Raquette Lake Railroad; 2 miles from school and churches; 10 miles from butter and cheese factory. Highways, state road. General surface, rolling. Altitude, 1,728 feet. Nature of soil, sandy. Acres in timber, all, virgin forest. House, 16

rooms, frame, bath, open fireplace, verandas on three sides. Outbuildings: shed, 20x30; ice house. House watered by running water and well. On edge of Fourth Lake of Fulton chain of lakes in the Adirondack mountains. Occupied by owner. Reason for selling, widow. Price, \$7,500. Terms, easy. Would be ideal place for summer boarders. Address Mrs. Martha J. Hichman, owner, 358 Ann St., Little Falls, N. Y.

HERKIMER COUNTY

Area, 1,754 square miles. Population, 64,109. Annual precipitation, 50.68 inches. Annual mean temperature, 43.2°. Number of farms, 3,092. County seat, Herkimer.

This county is situated in the northeastern part of the state and is a long, narrow county. It is intersected by the Mohawk and Black rivers and is also drained by the East and West Canada creeks and the Moose river.

The surface is diversified with high ridges, steep hills, valleys and extensive forests. A large part of the northern portion of the county has the same general features of the other regions of the Adirondacks. The southern part of the county, below the north branch of the West Canada creek, becomes gently undulating and suitable for agriculture. The soil most commonly found is a yellow clay loam, although in the valleys along the West Canada Creek and the Mohawk River the black slaty loam predominates. The southern part of the county is intersected by the New York Central railroad and the Erie Canal and the northern part by a branch of the New York Central railroad. Electric lines extend from Little Falls through Herkimer to Utica and from Herkimer to Richfield Springs, Otsego county, thus giving ample local markets. The value of all farm property is \$19,607,700, an increase of 30.4 per cent over the value shown in 1900. The leading crops are corn, 172,573 bushels; oats, 511,560 bushels; barley, 16,699 bushels; buckwheat, 26,793 bushels; potatoes, 520,121 bushels; hops, 15,200 pounds; hay and forage, 190,797 tons. Average price of improved land is \$29.30. Domestic animals reported: Dairy cows, 40,423; horses, 8,213; swine, 9,754; sheep, 2,957; poultry, 134,528; production of milk, 21,747,574 gallons. Total receipts from sale of dairy products, \$2,175,797. There are 92 milk stations and factories in the county, 183 district schools with academies at Herkimer and Little Falls. These with the splendid high schools of the towns and villages offer educational privileges of the highest rank for the residents of the county. The agricultural organizations are made up of a county agricultural society and 20 granges.

TOWN OF COLUMBIA

Population 1,090

No. 239.—Farm of 135 acres: located 6 miles from Ilion P. O., R. D. No. 2, 3 miles from railway station at Cedarville on line of D., L. & W. R. R.; $\frac{1}{4}$ mile from school; 1 mile from Protestant church, $1\frac{1}{2}$ miles from butter factory and cheese factory; 3 miles from milk station; 8 miles from milk condensing plant. Highways, hilly. Surface of farm, rolling. Soil, clay, good. Acres in meadow, 50; in natural pasture, 65; in timber, 20, maple. Acres tillable, 115. Fruit, apples and pears. Best adapted to corn and potatoes. Fences, wire, good condition. House, 20x30, 2 stories. Outbuildings: basement barn, 30x70; barn, 24x52, good

condition; also barn, 20x44. House watered by pump; barns and fields, by pond. Occupied by tenant. Reason for selling, owner in other business. Price, \$6,000. Terms, one-third down, balance on mortgage for term of years. Address Chas. D. Hopkins, owner, Cedarville, N. Y. Will rent.

No. 240.—Farm of 165 acres, located 6 miles from Ilion P. O., R. D. No. 2, and railway station, on line of N. Y. C. R. R.; $\frac{1}{2}$ mile from school; 2 miles from church, butter factory and cheese factory; 4 miles from milk station; 8 miles from milk condensing plant. Highways, hilly. Surface of farm, rolling. Soil, light clay. Acres in meadow, 60; in natural pasture, 60;

**FIG. 34.— HOUSE ON FARM NO. 238, TOWN OF INLET, HAMILTON
COUNTY.**

FIG. 35.— HOUSE ON FARM NO. 246, TOWN OF RUSSIA, HERKIMER COUNTY.

62
OF
1924

in timber, 40. Acres tillable, 120. Fruit, apples and pears. Best adapted to corn, potatoes and oats. Fences, wire, fair condition. House, 26x36, 1½ stories; house, 18x24, 1½ stories. Outbuildings: barn, 30x66; stables, 16x66. House watered by pump, fields by creek. Occupied by tenant. Reason for selling, owner living in village. Price, \$5,000. Terms, \$1,500 down, balance on mortgage. Address Chas. D. Hopkins, owner, Cedarville, N. Y. Owner will rent.

TOWN OF LITTLE FALLS

Population 627

No. 241.— Farm of 166 acres; located 7 miles from railway station at Little Falls on line of W. S. Ry.; 50 rods from school and church; 1 mile from cheese factory; 1¼ miles from milk station; 7 miles from milk condensing plant. Highways, state road. Surface of farm, level and rolling. Acres that can be used as meadow, 125; in natural pasture, 45; in timber, 6, maple, beech, basswood and hemlock. Acres tillable, 160. Fruit, good apple orchard, also pears and plums. Adapted to hay, corn, oats and barley. Fences, cedar post and wire, good condition. House, new, 14 rooms, fine condition. Outbuildings: barn, 36x85; cow barn attached, 125x18, wagon house, tool house, poultry and hog house. Water in house and barn, fields watered by spring. Occupied by owner. Reason for selling, poor health. Price, \$7,500. Terms, ⅓ cash, balance on mortgage. Address A. B. Davis, owner, 16 John street, Ilion, N. Y. Owner will rent.

No. 242.— Farm of 254 acres; located 3 miles from Little Falls P. O., R. D., and railway station, on lines of N. Y. C. & West Shore R. Rs.; ½ mile from school; 3 miles from churches. Milk called for at farm. Highways, good. Little Falls has population of 13,022 and reached by highway. Surface of farm, rolling. Soil, black and sandy loam. Acres used as meadow, 100; in natural pasture, 100; in timber, 15, maple, beech, maple and hemlock. Acres tillable, 200. Fruit, enough for home use. Adapted to hay, wheat, oats, barley, corn, potatoes and garden truck. Fences, cedar posts and wire, good condition. Two houses, one new, 14 rooms and bath, good condition. Outbuildings: main barn, 38x127; horse barn, 30x50; cow house, 27x30; corn house, 12x20, good condition. Watered, house and barns by running water, fields by creeks

and springs. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$60 per acre. Terms, \$5,000 down, balance on mortgage at 5 per cent. This farm is well supplied with running water. Address Richard DeLong, owner, Mohawk, N. Y., R. D. No. 3.

No. 243.— Farm of 166 acres; located 6 miles from Mohawk and 7 miles from Little Falls on N. Y. C. & W. S. R. Rs.; 15 minutes walk from church; ¼ mile from cheese factory; 1¼ miles from milk station and 7 miles from condensing plant. Highways, state road. Nearest city, Little Falls, population 13,022, 7 miles distant. Reached by trolley. General surface, rolling. Acres that can be used as meadow, 140; in timber, 6, maple, beech, birch, basswood and hemlock. Acres tillable, 160. Fruit, apples enough for family use. Best adapted to hay, corn, oats and barley. Fences, wire, in good condition. House, large, concrete cellar. Outbuildings, barn, 85x36 with cow stable attached, 120x17 in good condition, also two other barns. Watered, house and barns by wells; fields, by springs. Occupied by owner. Reason for selling, poor health. Price, \$45 per acre. Terms, ⅓ cash and remainder on mortgage. Address A. B. Davis, 16 John street, Ilion, N. Y.

TOWN OF NEWPORT

Population 1,724

No. 244.— Farm of 37 acres; located ¼ mile from P. O., R. D.; ½ mile from railway station at Newport on line of M. & M. R. R.; ¼ mile from school, churches, milk station and condensing plant. Highways, state road. Nearest village, Newport, population 697, ¼ mile distant, reached by highway. General surface, rolling. Nature of soil, rich loam. Acres that can be used as meadow, 37. Acres tillable, 37. Best adapted to hay, corn, grain of any kind. Fences, wire, in good condition. Fields watered by brook. Village reservoir on farm. Reason for selling, to settle an estate. No buildings. Price, \$4,000. Terms, easy. Address A. G. Hall, owner, Amsterdam, N. Y.

No. 245.— Farm of 313 acres; 3½ miles from Poland, on line of N. Y. C. R. R.; ½ mile from school; 3½ miles from churches and milk station; 4 miles from condensing plant. Highways, dirt and state road. Nearest village, Poland, population 315, 3½ miles distant.

Reached by highway. General surface, level. Nature of soil, clay loam. Acres that can be used as meadow, 80; in natural pasture, 200; in timber, 35, hard wood and hemlock. Acres tillable, 200. Fruit, some common varieties. Best adapted to hay, oats, corn and potatoes. Fences, mostly wire in good repair. House, 8 rooms. Outbuildings, large basement barn, storage barn, horse barn and hog house, all in good condition. Watered, house and barns by well; fields, by brooks and springs. Occupied by tenant. Reason for selling, other business. Price, \$47.50 per acre. Terms, $\frac{1}{3}$ cash and balance on mortgage. Address J. W. Brayton, Poland, N. Y.

TOWN OF RUSSIA

Population 1,747

No. 246.—Farm of 152 acres; located $\frac{1}{8}$ mile from Grant P. O.; 4 miles from

railway station at Hinckley on line of N. Y. C. R. R.; $\frac{1}{8}$ mile from school and churches; $1\frac{1}{2}$ miles from cheese factory. General surface, pastures rolling, meadow, flat and level. Altitude, 1,220 feet. Nature of soil, loam. Acres in meadow, 60; in pasture, 90; in timber, 10, spruce and hardwood. Acres tillable, 75. Fruit, 10 apple trees. Adapted to hay, oats, corn, barley and buckwheat. Fences, wire, fair condition. House, 10 rooms, in good condition. Beautiful view from porch. Over 4 miles frontage on Hinckley Lake. Outbuildings, cow barn 28 x 75 with basement, horse barn 24 x 40 with basement, shop 20 x 30, hay barn, poultry house. House and barns watered by running water; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$3,500. Terms, easy. Address Corey Garlock, owner, Grant, N. Y.

JEFFERSON COUNTY

Area, 1,868 square miles. Population, 81,009. Annual precipitation, 40.38 inches. Annual mean temperature, 48.2°. Number of farms, 5,778. County seat, Watertown.

This county is located in the northern part of the state, bounded on the northwest by the St. Lawrence river and on the west by Lake Ontario. The Black and Indian rivers traverse the county affording abundant water power which has not yet been very greatly developed.

The surface is diversified with gentle undulations, abrupt terraces and deep ravines. Along Lake Ontario and the St. Lawrence river the soil is the same gravelly alluvium found near the shore of the other lake counties. Further inland the surface is generally level or gently undulating. On the second level, ranging from 600 to 900 feet above the lake, the surface is more rolling and the soil becomes a rich, clay loam. Southeast of this, and extending into Lewis county, the surface is hilly and diversified with deep ravines and abrupt terraces. Clay loam soil still predominates, but much black loam is found. A large part of the county is covered with forest in which ash, oak, pine, hemlock, beech, spruce and sugar maple are found. The well-known Potsdam sandstone is found in this county and also extensive deposits of iron ore.

The following crops were reported: Corn, 240,800 bushels; oats, 2,050,568 bushels; barley, 80,141 bushels; buckwheat, 32,950 bushels; dry beans, 15,632 bushels; potatoes, 789,027 bushels; hay and forage, 341,544 tons. The value of all farm property is \$40,095,331, an increase of 27.6 per cent over the census of 1900. The average value of improved land in the county is \$43.13 per acre. Domestic animals; dairy cows, 64,855; horses, 17,746; swine, 19,818; sheep, 12,059; poultry, 230,378. Total production of milk, 32,881,485 gallons and the total receipts from the sale of dairy products, \$3,287,056. The county is intersected and traversed in several directions by the R., W. & O. railway lines and trolley lines, giving ample transportation facilities. Watertown, a great railroad center, is the headquarters of the Watertown Produce Exchange, the greatest cheese market in the United States. Along the St. Lawrence shore are located many large hotels and cottages which accommodate the thousands of tourists who annually visit the Thousand Islands, thus a great local market is had for all farm produce. There are 347 district schools in the county with academies at Watertown and Carthage; 168 dairy stations and factories furnish nearby market for milk. There are two county fair societies, one Holstein-Friesian breeder's club, one Patron of Industry, three subordinate granges and one Pomona grange, all organized and working for some one or more agricultural interest.

**FIG. 36.—BUILDINGS ON FARM NO. 242, TOWN OF LITTLE FALLS,
HERKIMER COUNTY.**



TOWN OF CAPE VINCENT

Population 2,514

No. 247.— Farm of 154 acres; located 4 miles from Cape Vincent railway station, on line of N. Y. C. R. R.; $\frac{1}{2}$ mile from school. Has 1 mile shore front on St. Lawrence river. Nearest city, Watertown, population 26,895, 25 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, clay and black loam. Acres that can be used as meadow, 30; in natural pasture, 60; in timber, 20. Acres tillable, 90. Fruit, 40 apple trees. Best adapted to hay and grain. Fences, wire and board. House, 2 stories, 20x40, with wing, good condition. Barn, 40x80, stable for 30 cows, new creamery with ice house, good condition, granary, poultry house, and hog house. Watered by St. Lawrence river. Occupied by tenant. Reason for selling, other business. Price, \$1,500. Address F. L. Hall, owner, Clayton, N. Y. Will rent with option to buy.

TOWN OF ELLISBURGH

Population 3,487

No. 248.— Farm of 96 acres; located $2\frac{1}{2}$ miles from Mannsville P. O., R. D. 2, and railway station on line of N. Y. C. R. R.; $\frac{1}{2}$ mile from school; $2\frac{1}{2}$ miles from churches, milk station, cheese and butter factory and condensing plant. Highways, state road. Nearest village, Mannsville, population 617, $2\frac{1}{2}$ miles distant, reached by highway. General surface, rolling. Altitude, 200 feet. Nature of soil, gravelly loam; acres tillable, 85; acres in timber, 7, maple. Fruit, apples, pears, plums and currants. Best adapted to corn, oats and barley. Fences, wire, in good condition. House, nearly new, 10 rooms, two stories. Barn, 36x55, basement stable. House and barn watered by well, fields by three creeks. Reason for selling, other business. Price, \$3,000. Terms, \$500 down, easy payments for balance. Address A. B. Schuyler, owner, Adams, N. Y. Will rent.

TOWN OF LE RAY

Population 2,540

No. 249.— Farm of 250 acres; located 3 miles from Evans Mills P. O., R. D. 2, and railway station on line of N. Y. C. R. R.; 1 mile from school and 3 miles

from churches; 3 miles from milk station; 1 mile from cheese factory. Highways, clay and gravel. Nearest city, Watertown, population 26,895, 13 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 75; in pasture, 85; in timber, 10, maple, hemlock and basswood; acres tillable, 240. Adapted to hay, grain and dairying. Fences, wire. House, 2 stories, 24x30, with ell for kitchen. Outbuildings, hay barn, 54x30; cow barn, 36x60, with ell 36x76; new silo, 16x30; grain mill and tank; horse barn, 24x30; granary; hog house and tool house. House watered by drilled well, barns by same, fields by Indian river. Occupied by tenant. Reason for selling, age of owner. Price, \$55 per acre. Terms, \$3,000 down, balance on mortgage. Forty-two cows will be sold with farm at a reasonable price. Address W. H. Reese, owner, Evans Mills, N. Y.

TOWN OF LYME

Population 1,809

No. 250.— Farm of 108 acres; located $3\frac{1}{2}$ miles from Chaumont P. O., and railway station, on line of N. Y. C. & H. R. R. R.; $\frac{1}{2}$ mile from school; $3\frac{1}{2}$ miles from churches; $3\frac{1}{2}$ miles from cheese factory and milk station. This farm is located on Cherry Island, $\frac{1}{2}$ mile from mainland. Nearest village, Chaumont, population 682, $3\frac{1}{2}$ miles distant, reached by boat and highway. Surface of farm, nearly level. Altitude, 300 feet. Soil, clay loam. All in meadow and grain. Nice trees along shores, of elm and oak; acres tillable, 105. Fruit, few cherry trees. Adapted to hay, alfalfa, oats, corn, wheat, etc. Houses, 2 moderate sized summer cottages. Outbuildings: basement barn, 36x70; hay barn, 30x40; ice house, granary, in good condition. Watered, house, by well, fields, by Chaumont bay. This is an ideal summer home. Occupied by owner. Reason for selling, wishes money to invest in manufacturing interests. Price, \$15,000. Terms, cash, or \$10,000 cash, balance on mortgage. Address The Adams & Duford Co., owners, Chaumont, N. Y. Owners will rent.

No. 251.— Farm of 250 acres; located 2 miles from Chaumont P. O., and railway station, on line of N. Y. C. R. R.; $\frac{1}{2}$ mile from school; 2 miles from

churches; 2 miles from cheese factory and milk station. Highways, good. Nearest village, Chaumont, population, 682, 2 miles distant, reached by highway. Surface of farm, rolling. Altitude, 300 feet. Soil, clay loam and black muck. Acres in meadow, 30; in natural pasture, 220; timber cut off and ready to clear up for new land; acres tillable, 125. Adapted to hay, oats, barley, corn, potatoes, etc. Fences, wire, in good condition. No house. Barn, 30x60, in good condition. Watered, barn, by well, with windmill pump. Occupied by tenant. Reason for selling, wishes to invest money in manufacturing business. Price, \$20 per acre. Terms, cash. Address The Adams & Duford Co., owners, Chaumont, N. Y. Will rent.

TOWN OF WILNA

Population 6,303

No. 252.—Farm of 200 acres; located 4 miles from Carthage, on line of N. Y. C. R. R.; 30 rods from school; 4 miles from churches and milk station; 2 miles from butter factory; $\frac{1}{2}$ mile from cheese factory. Highway, state road. Nearest village, Carthage, population 3,871, 4 miles distant. General surface, level. Nature of soil, good. Acres that can be used as meadow, 150; acres now used as meadow, 125; in natural pasture, 75; in timber, 25, beech, birch, elm, maple and ash. Acres tillable, 125. Best adapted to oats, corn and hay. Fences, wire, in good condition. House, large. Outbuildings, in good condition. Watered, house by cistern; barns, by wells, and fields, by creek. Occupied by

owner. Reason for selling, wishes to retire. Price, \$12,000. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address Lotus S. Fargo, owner, Carthage, N. Y.

No. 253.—Farm of 150 acres; located 1 mile from P. O. and railway station at Carthage, on line of Carthage & Copenhagen and N. Y. C. railroads; 1 mile from butter factory and condensing plant. Highways, state road. General surface, level. Nature of soil, good clay and muck land. Timber, enough for home use. Acres tillable, 100. Adapted to barley, oats, corn and potatoes. Fences, barbed wire. House, 32x38, good condition. Barn, 90x45. Watered, house by spring. Occupied by tenant. Reason for selling, death in family. Price, \$5,000, with dairy. Address A. Fitzsimmons, owner, 33 North James street, Carthage, N. Y.

TOWN OF WORTH

Population 579

No. 254.—Farm of 100 acres; located 8 miles from Adams P. O., R. D. No. 1; $1\frac{1}{4}$ miles from school; $\frac{1}{8}$ mile from church; $2\frac{1}{8}$ miles from cheese factory, milk station and condensing plant. Highways, good. Soil, gravel and clay loam. Acres that can be used as meadow, 95; in pasture, 40; in timber, 5. Fruit, a few apples. Fences, American wire. House, 16x24, with wing. Barn, 14x50. Watered, by 2 creeks and spring. Price, \$2,000. Terms, \$1,000 cash, balance to suit purchaser. Address Daniel Groves, owner, Adams, N. Y.

LEWIS COUNTY

Area, 1,288 square miles. Population, 25,947. Annual precipitation, 36.79 inches. Annual mean temperature, 45.1°. Number of farms, 3,343. County seat, Lowville.

This county is situated north of the Mohawk Valley in the north central part of the state. It is drained by the Black, Beaver, Moose and Oswegatchie rivers. The surface is hilly and broken except along the Black river which flows through the center of the county from south to north. Along this wide valley the soil is of a rich limestone formation and the surface is gently rolling with some level tracts. To the east of these, the land rises in abrupt broken hills to an elevation in some places of 1,200 feet above the valley. The hills are covered with forests of sugar maple, pine, spruce, birch, hemlock and other trees, and are too rough for cultivation. In the western portion of the county, the hills are mostly long, sloping ridges with fertile clay loam soils. Trenton limestone is found in parts of the county. Agriculture is the chief industry. The principal products are corn, 37,522 bushels; oats, 668,966 bushels; barley, 41,283 bushels; potatoes, 627,771 bushels; hay and forage, 156,063 tons. Farm property reaches a total valuation of \$16,288,674, an increase of 24.7 per cent in the past ten years. The average price of improved land per acre is \$28.16. Farms report the following domestic animals: Dairy



PLOWING FOR CORN IN HERKIMER COUNTY.

cows, 36,291; horses, 8,037; swine, 12,256; sheep, 5,225; poultry, 98,569. Milk produced, 18,435,828 gallons. Total receipts from the sale of dairy products are \$1,611,947. The county is thoroughly well equipped with transportation facilities. There are 208 district schools; 106 stations and factories where milk finds a ready market; an agricultural society which holds an annual fair; twenty-one granges and one Pomona grange. The production of cheese of all kinds is very large.

TOWN OF DENMARK

Population 2,116

No. 255.— Farm of 163 acres; 2 miles from Copenhagen P. O., R. D., and railway station on line of C. & C. R. R.; $\frac{1}{8}$ mile from school; 2 miles from churches, butter and cheese factory, milk station and condensing plant. Highways, state road. Nearest city, Watertown, population 26,835, 12 miles distant, reached by rail or highway. Surface of farm, part level and part slightly rolling. Altitude, 1,200 feet. Soil, clay loam. Acres in meadow, 100; in timber, 25, mostly maple and beech; acres tillable, 160. Fruit, 60 apple trees, plums and cherries. Adapted to hay, corn, oats, potatoes, etc. Fences, wire, in fair condition. House, 14 rooms, in fine condition. Barn, 42x90, with ell, 30x42; hog house, 16x24; tool house, 18x30. Watered, house, by well and cistern; barns, by spring; fields, by springs and brook. Occupied by owner. Reason for selling, ill health. Price, \$8,300. Terms, \$4,000 cash, balance on mortgage at 5 per cent. This price includes all stock, farming implements, hay and grain on hand. Address Henry Rogers, owner, Copenhagen, R. D. 2, N. Y.

TOWN OF LEWIS

Population 733

No. 256.— Farm of 150 acres; located 3 miles from West Leyden P. O., R. D. No. 1; 12 miles from railway station at Boonville, on line of N. Y. C. R. R.; 1 mile from school; 1 mile from churches and cheese factory. Highways, stone roads. Nature of soil, good. Acres that can be used as meadow, 25; in natural pasture, 125; small amount of timber, spruce. Best adapted to hay. Fences, wire. House, 22x35. Barn, 35x60. Watered, house by pump, barns, same. Occupied by owner. Reason for selling, ill health. Price, \$4,000. Terms, cash. Address William Earnst, owner, West Leyden, N. Y.

No. 257.— Farm of 150 acres; located 8 miles from Constableville P. O., R. D. No. 2; 15 miles from railway station at

Lyons Falls, on line of N. Y. C. R. R.; $\frac{1}{4}$ mile from school; $\frac{1}{2}$ mile from churches; $\frac{1}{4}$ mile from cheese factory. Acres that can be used as meadow, 35; in natural pasture, 115. Best adapted to hay. Fences, wire. House, 24x40. Barn, 40x75. Occupied by owner. Reason for selling, other business. Price, \$4,500. Terms, cash. Address Matties Kipp, owner, Constableville, N. Y.

TOWN OF LEYDEN

Population 1,663

No. 258.— Farm of 102 acres; located $\frac{3}{4}$ mile from Talcottville P. O., R. D. No. 1; $2\frac{3}{4}$ miles from railway station at Denley, on line of N. Y. C. R. R.; $\frac{3}{4}$ mile from school and churches; 1 mile from butter factory; $\frac{1}{2}$ mile from cheese factory and $2\frac{3}{4}$ miles from milk station. Highways, excellent. Nearest city, Utica, population, 80,589, 35 miles distant, reached by rail and highway. General surface of farm; slightly rolling. Altitude, 1,200 feet. Nature of soil, dark loam. Acres that can be used as meadow, 33; in natural pasture, 44; in timber, 15; maple, beech, birch, hemlock and spruce. Acres tillable, 85. Fruit, 7 plum and 20 apple trees. Adapted to corn, potatoes, oats, barley and hay. Fences, mostly wire, good condition. House, $1\frac{1}{2}$ stories, painted, very good condition. Outbuildings, barn, 30x40; barn, 32x46; cheese-house; other buildings and a summer milking barn with loft and stanchions for 22 cows. Watered, house by well of soft water, barns by stream near by and fields, by stream. Occupied by tenant. Reason for selling, old age and ill health. Price, \$5,400. Terms, \$2,000 cash. Other buildings are a brick smoke house, hog house, sheep shed and a large valuable ice house. Address J. Bassett, owner, Talcottville, N. Y.

TOWN OF NEW BREMEN

Population 1,660

No. 259.— Tract of land of 67 acres; located 1 mile from Beaver Falls P. O. and railway station, on line of L. & B. R. R.; 1 mile from school, church and milk station. Highways, good. Nearest

large village, Lowville, population 3,244, 8 miles distant, reached by rail and highway. This land is partly wooded and has never been tilled. Surface of farm, level. Soil, sandy loam. Adapted to potatoes, grain, fruit, pasture, etc. Price, \$500. Terms to suit purchaser. There are no buildings on this tract. Is suitable place for bungalow; very fine view. Address Mrs. Clara S. Itterly, owner, Shawnee, Ohio.

TOWN OF OSCEOLA

Population 467

No. 260.—Farm of 200 acres; located 1 mile from Osceola P. O.; 12 miles from railway station at Camden, on line of N. Y. C. & H. R. R. R.; 1 mile from school, churches, butter factory and cheese factory. Highways, state road. Camden has population of 2,181. Surface of farm, rolling. Soil, gravelly loam. Acres in meadow, 40; in natural pasture, 90; in timber, 40, hardwood. Nearly all tillable. Fruit, 60 apple trees. Best adapted to hay, corn and grain. Fences, nearly all new wire. House, 1½ stories, 7 rooms. Outbuildings: cow barn with basement, 40x80; horse barn, 30x40, with basement. Forty-five stanchions for cattle. Two silos and poultry house. Watered, house and barns piped from spring, fields by spring and streams. Reason for selling, other business. Price, \$7,500, which includes 35 Holstein cows, milking machine, up-to-date farm machinery and tools. Terms, reasonable payment, balance on mortgage at 5 per cent. The New York Central Railroad is shortening its branch from Rome to Thousand Islands, passing within 4 miles of farm. Address O. G. Cowles, owner, Osceola, N. Y.

TOWN OF WATSON

Population 771

No. 261.—Farm of 300 acres; located 2 miles from Crystal Dale P. O. and 6 miles from railway station, on line of N. Y. C. R. R.; ¼ mile from school; 2 miles from churches and 3 miles from milk station. Highways, good. General surface of farm, level. Altitude, 1,250 feet. Soil, sandy loam. Acres that can be used as meadow, 75; in natural pasture, 100; in timber, 25, hard and soft. Acres tillable, 250. Fruit, apples, plums, etc. Adapted to all kinds of crops. Fences, wire, good. Eight-room house, good stone basement. Large frame barn; hog house, granary and ice house. House

and barns watered by running water and fields, by springs and creek. Crystal Lake, 300 feet from house. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms, \$3,000 cash, balance on mortgage. Address Stephen Baker, owner, Crystal Dale, N. Y.

No. 262.—Farm of 50 acres; located 6 miles from Lowville P. O. and railway station, on line of N. Y. C. & H. R. R. R.; ⅛ mile from school; ½ mile from churches and cheese factory. Highways, good. Surface of farm, level and slightly rolling. Altitude, 1,250 feet. Soil, sandy and black loam. Acres that can be used as meadow, 30; in natural pasture, 15; in timber, 5, 100 trees, sugar bush—hardwood. Acres tillable, 35. Fruit, apples, plums, etc. Adapted to all kinds of crops. Fences, good. Good frame house, 8 rooms, painted white. Barn, 30x40. House watered by well, barns by running water, fields by creek. Reason for selling, ill health. Price, \$600. Terms, half cash, balance on mortgage at 5 per cent. Hardwood timber on this place to last for firewood a lifetime. Address Peter Wetmore, owner, Syracuse, N. Y.

No. 263.—Farm of 46 acres; located 5½ miles from Lowville, on line of N. Y. C. R. R.; 1¼ miles from school, churches and cheese factory. Highways, good. Nearest village, Lowville, population 3,244. Reached by highway. General surface, rolling. Altitude 1,225 feet. Nature of soil, sandy black loam. Acres that can be used as meadow, 30; in natural pasture, 12; in timber, 4. Acres tillable, 30. Fruit, apples and plums. Adapted to general farm crops. Fences, good. House, 7 rooms. Outbuildings, barn, 26x30. Watered, house and barns by running water and fields by creek. Occupied by owner. Reason for selling, ill health. Price, \$1,650. Terms, ½ cash and remainder on mortgage. Five cows, 2 calves, 1 horse and harness, as well as some farm tools and supplies go with the farm. Address George D. Phillips, owner, Watson, N. Y.

No. 264.—Farm of 300 acres; located 8 miles from Lowville, on line of N. Y. C. R. R.; 1 mile from school and 2 miles from churches and cheese factory. Highways, good. Nearest village, Lowville, population 3,244, 8 miles distant. Reached by highway. General surface, level. Altitude, 1,250 feet. Nature of soil, sandy loam. Acres that can be used

FIG. 37.—VIEW ON FARM NO. 260, TOWN OF OSCEOLA, LEWIS COUNTY.

**FIG. 38.—CATTLE AND BARNS ON FARM NO. 260, TOWN OF OSCEOLA,
LEWIS COUNTY.**



as meadow, 100; in natural pasture, 100; in timber, 25, hard and soft wood. Acres tillable, 250. Fruit, some apples and plums. Adapted to all kinds of crops. Fences, good. House, 8 rooms in good condition. Outbuildings, basement barn, hog house, granary and ice house.

Watered, house and barns by running water; fields by springs and creek. Occupied by owner. Reason for selling, death in family. Price, \$7,000. Terms, \$4,000 cash and remainder on mortgage at 5 per cent. Address Stephen Baker, owner, Crystaldale, N. Y.

MADISON COUNTY

Area, 628 square miles. Population, 41,742. Annual precipitation, 48.5 inches. Annual mean temperature, 45.6°. Number of farms, 4,042. County seat, Wampsville

This county is located in the central part of the state, touched on the north by Oneida Lake, and Oneida Creek forms its northeast boundary. It is drained by Chenango and Unadilla Rivers and Chittenango, Canastota and Oriskany Creeks. This county is one of the leading counties for grazing and stock raising. It is fertile and productive and easily accessible to the best markets. The farms offer excellent opportunities and give good returns for intelligent effort. In the southern part the surface is mostly hilly, traversed by broad valleys, while in the northern part gentle undulations and stretches of level land prevail. The county is well wooded and has an abundance of pure water. The rocks which underlie are sandstone and shale. The county has quarries of gypsum, water lime, iron ore and excellent building stone. In the western part, gravelly loam is prevalent, while in the southern section, volusia silt liam predominates. The soil in the northern portion is usually rich, black and gravelly loam whereon are produced enormous crops of celery, onions, etc. The leading crops are corn, 212,790 bushels; oats, 712,637 bushels; barley, 66,006 bushels; buckwheat, 111,431 bushels; potatoes, 619,283 bushels; hops, 1,384,508 pounds; hay and forage, 238,578 tons. Alfalfa grows abundantly in the county. The average price of farm land per acre is \$41.45. Domestic animals are reported as follows: Dairy cows, 36,994; horses, 11,282; swine, 7,750; sheep, 7,602; poultry, 211,716. There were produced 22,381,370 gallons of milk, and the total receipts from the sale of dairy products were \$2,247,721. Live stock represents 21 per cent. of the entire value of farm property in the county, making it rank third in this industry. The county is intersected by the New York Central and Hudson River; New York, Ontario and Western; West Shore; Delaware, Lackawanna and Western and the Cortland and Northern railroads; the Erie canal also passes through the northern portion. There are 199 school districts with high schools and academies in some of the larger villages. Colgate University is located at Hamilton and is one of the well known universities of the east. At Morrisville is located one of the new agricultural schools which are contributing so much to the agricultural power and prosperity of the state. Flour mills, breweries, knitting mills, carriage factories and canning factories are located in this county. There are seventeen agricultural organizations, thirty-five miles of state and county roads, 1,273 miles of improved highways. The principal exports of the county are hops, dairy products and pure-bred cattle. The soil and climate is especially adapted for the production of apples of the highest quality and other fruits can be grown with excellent results.

TOWN OF BROOKFIELD

Population 2,330

No. 265.— Farm of 110 acres; located 1 mile from North Brookfield P. O. and 2 miles from railway station, on D., L. & W. R. R.; 1 mile from school and churches; 1½ miles from butter factory; 2½ miles from cheese factory and 2 miles from milk station. Nearest city, Utica, population, 80,589, 28 miles distant, reached by rail and highway. Soil, very productive and in a high state of cultivation. Acres tillable, 90. Acres in timber, 20, 500 sugar maple trees; 30 bearing apple trees. Fences, barbed

wire with cedar posts, good condition. House, 10 rooms, 2 stories, in good condition. Modern barns with basements and concrete floors; silo and store house, 18x30. Watered by running springs and brook; concrete reservoir which holds 100 barrels, is piped to house and barn. Reason for selling, other business. Price, \$4,500. Terms, ½ cash, balance on mortgage. Address W. T. Squires, owner, North Brookfield, N. Y.

No. 266.— Farm of 120 acres; located ¼ mile from North Brookfield, on D., L. & W. R. R.; ¼ mile from school and

churches; $\frac{1}{2}$ mile from cheese factory and $1\frac{1}{4}$ miles from milk station. Acres tillable, 75; in timber, 40. Soil, very productive. Adapted to hops, stock raising, hay and grain. Good fences. Spring and brook water. Barn, 34x50, good condition, silo, 14x20. No house. Large pond of pure spring water on farm from which \$400 to \$500 worth of ice is sold each year. Price, \$4,500. Terms, $\frac{1}{2}$ cash. Address W. T. Squires, owner, North Brookfield, N. Y.

TOWN OF CAZENOVIA.

Population 3,867

No. 267.—Farm of 195 acres; located 4 miles from Cazenovia P. O., R. D. No. 3; 2 miles from railway station at New Woodstock, on line of L. V. R. R.; school on farm; 2 miles from churches; 2 miles from milk station and cheese factory. General surface of farm, rolling. Soil, sand and gravel. Acres that can be used as meadow, 80; in natural pasture, 80; in timber, 35, hemlock, maple and beech. Acres tillable, 80. Fruit, plums, pears, and apples. Best adapted to corn, wheat, oats, barley and cabbage. Fences, rail and wire, good condition. Seventeen-room house. Outbuildings: barn, good condition, room for 40 head of stock, water in barn, silo. House watered by well, barns by spring. Occupied by tenant. This farm has a good tenant house and is in good condition. Reason for selling, ill health and old age. Price, \$12,000. Terms, easy. Address, J. M. Elmore, owner, New Woodstock, N. Y.

No. 268.—Farm of 233 acres; located $\frac{1}{2}$ mile from New Woodstock P. O., R. D. No. 1 and railway station, on line of L. V. R. R.; $\frac{1}{2}$ mile from school and churches; $\frac{1}{4}$ mile from butter and cheese factory and $\frac{1}{2}$ mile from milk station. Highways, good. Nearest city, Syracuse, population 145,293, 22 miles distant, reached by rail and highway. General surface, rolling. Altitude, 1,200 feet. Nature of soil, gravelly loam. Acres used as meadow, 61; in natural pasture, 96; in timber, 15, maple, beech, basswood and elm. Fruit, apples, cherries, plums, currants, raspberries, strawberries, for home use. Best adapted to wheat, corn, grain of all kinds and 25 acres of alfalfa. Fences, first class condition, 2 miles of Page woven wire. House, 15 rooms, steam heat, in good condition. Outbuildings: barn No. 1, 30x114; barn No. 2, 36x60,

connected by enclosed shed 16x120, tool shed, poultry house, silo, etc. First class tenant house. House watered by running water, barns, by spring and fields, by spring. Cazenovia Lake, five miles distant. Occupied by owner for 80 years. Reason for selling, to settle an estate. Price, \$20,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address J. W. Coley estate, New Woodstock, N. Y.

No. 269.—Farm of 175 acres; located $1\frac{1}{2}$ miles from Cazenovia P. O., R. D. No. 1; $1\frac{1}{4}$ miles from railway station, on line of L. V. and N. Y. C. railroads: 1 mile from school; $1\frac{1}{4}$ miles from churches; $1\frac{1}{2}$ miles from butter factory and 1 mile from milk station. Highways, good. Nearest village, Cazenovia, population 1,928, 1 mile distant. General surface, rolling and level. Altitude, 1,300 feet. Nature of soil, loam. Acres that can be used as meadow, 150; in natural pasture, 50; in timber, 25, beech, maple, elm and ash. Adapted to hay, wheat, peas, barley and oats. Fences, mostly wire, good. House, 32x24, with wing, 14x24, new in 1916. Barns, 40x65, 20x80 and 18x24. Watered, house, by spring; barns, by spring and brook, and fields by trout brook. Cazenovia Lake, 2 miles distant. Occupied by tenant. Reason for selling, old age. Price, \$7,000. Terms, liberal. Address J. L. O'Hara, owner, Cazenovia, N. Y.

No. 270.—Farm of 180 acres; located $1\frac{1}{2}$ miles from New Woodstock P. O., R. D. 1, and railway station, on line of E. C. & N., a branch of Lehigh Valley R. R.; $1\frac{1}{2}$ miles from High School, Protestant churches, cheese factory and milk station; 3 miles from milk condensing plant. Highways, part hilly and part level. Nearest large village, Cazenovia, population 1,928, 6 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,300 feet. Soil, loam, some stone. Acres in meadow, 100; in natural pasture, 60; in timber, 20, largely second growth hemlock. Acres tillable, 125. Fruit, apples. Adapted to oats, barley, corn, potatoes, cabbage and hay. Fences, mostly wire, nearly all in good condition. House, 31x34, with wing, 14x18, 2 stories, large enough for 2 families, good condition. New 7-room tenant house. Outbuildings: basement cow barn, 120x30; horse barn, wagon shed, silo, granery, grain or hay barn, hen house, 16x60, built three years.

Watered, house, by cistern; barns, by running water and well; fields, by springs and creek. Price, \$65 per acre. Terms, one-half cash. Address E. L. Buell, owner, New Woodstock, N. Y.

\$12,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Price includes stock and tools. Address Mrs. Amelia A. Elmore, owner, New Woodstock, N. Y.

TOWN OF EATON

Population 2,561

No. 273.—Farm of 200 acres; $2\frac{1}{2}$ miles from Eaton P. O.; 3 miles from Eaton station, on line of N. Y., O. & W. R. R.; R. D. Highways, in fair condition. Adapted to corn, potatoes, dairying and grain. Acres in meadow, 75; tillable, 150; 25 acres in timber, 250 sugar maples; 3 acres of bearing apples. Watered by well, springs and brooks; $1\frac{1}{2}$ -story house. Large barn, silo and other outbuildings. This farm borders on Bradley Brook reservoir and is $\frac{1}{2}$ mile from Hatches Lake, which is a summer resort. Price, \$8,500. Terms, reasonable. Address Lewis Hopkins, owner, Lebanon, N. Y., R. D. Owner will rent on shares.

No. 274.—Farm of 362 acres; located $1\frac{1}{2}$ miles from Eaton P. O., and railway station, on line of N. Y. O. & W. R. R.; $1\frac{3}{4}$ miles from school; $1\frac{1}{2}$ miles from churches; $1\frac{1}{2}$ miles from butter factory; $1\frac{3}{4}$ miles from cheese factory, milk station and condensing plant. Highways, hilly, but good. Nearest city, Oneida, population 9,461, 18 miles distant, reached by rail and highway. General surface of farm, rolling, part level. Altitude, 1,300 feet. Nature of soil, clay and sandy loam. Acres that can be used as meadow, 175; in natural pasture, 115; in timber, 72, maple, beech and some hemlock. Acres tillable, 200. Fruit, old apple orchard. Best adapted to corn, oats, potatoes, winter wheat and hay. Fences, stone walls and rail, good condition. House, burned, foundation stands. Outbuildings, burned, foundation of large barns stand, some outbuildings and 2 meadow barns still in existence. Watered, spring water running in house and barnyard, fields by springs and brook. Chenango river, 1 mile distant. Occupied by tenant. Price, \$10,000. Terms, $\frac{1}{2}$ cash. Address R. C. Tenny, owner, Pueblo, Colorado.

No. 275.—Farm of 160 acres; 2 miles from Eaton P. O., R. D. 1, and railway station, on line of N. Y., O. & W. R. R.; 1 mile from school; 2 miles from churches, butter and cheese factory and

No. 271.—Farm of 63 acres; located 1 mile from New Woodstock P. O., R. D. No. 26, and railway station on line of Lehigh Valley R. R.; 1 mile from school, churches, cheese factory and milk station. Highways, state road. Nearest city, Syracuse, population 145,293, 22 miles distant, reached by rail or highway. General surface, part level and part rolling. Nature of soil, gravel with clay subsoil. Acres that can be used as meadow, 40; in natural pasture, 20; in timber, 4, cedar and maple. Acres tillable, 57. Fruit, apples, 48 pear, 5 plum, 15 cherry trees, currants, gooseberries and 200 Columbia raspberries. Best adapted to corn, oats, barley, cabbage and potatoes. Fences, wire, good condition. Twelve-room house in good condition, bath and steam heat, two cellars. Outbuildings, main barn 68x32 with cemented cow barn for 20 head, horse barn 24x48, granary, poultry house and pig pen. House watered by wells and cistern, barns, by running water and fields, by brooks. Occupied by owner. Reason for selling, old age. Price, \$6,300. Terms, one-half cash, balance on mortgage. Address A. P. Mead, owner, New Woodstock, N. Y.

No. 272.—Farm of 195 acres; located 4 miles from Cazenovia P. O., R. D. No. 3; 2 miles from railway station at New Woodstock, on line of L. V. R. R.; 2 miles from high school, churches, butter factory, cheese factory and milk station and 4 miles from condensing plant. Highways, state road. Nearest village, Cazenovia, population 1,928, 4 miles distant, reached by highway. General surface, rolling. Nature of soil, sand and gravel. Acres that can be used as meadow, 80; in natural pasture, 80; in timber, 35, hemlock, maple and beech. Acres tillable, 80. Fruit, plums, pears, apples and berries. Adapted to corn, wheat, oats, barley, alfalfa and cabbage. Fences, rail and wire, good. House, 17 rooms, good condition. Outbuildings, large barn, with water in barn; barns are all connected, good silo. House, watered by well; barns, by springs, and fields, by springs. Occupied by tenant. Reason for selling, to settle an estate. Price,

milk station; 7 miles from condensing plant. Highways, hilly, good. Nearest cities, Syracuse, 30 miles distant, population 145,293; Oneida, 12 miles distant, population 9,461, reached by rail or highway. Surface of farm, part hilly, part rolling and some level. Altitude, 1,500 feet. Soil, gravelly loam. Acres in meadow, 40; in natural pasture, 60; in timber, 20, mostly sugar maple; acres tillable, 40. Fruit, 100 apple trees, pears, cherries, plums, etc. Best adapted to oats, corn and wheat. Fences, wire, fair condition. House, 14 rooms, in good condition. Outbuildings, large barn, with basement for 40 cows; horse barn and stable; corn house, with basement for hogs. Watered, house, by well; barns, by springs piped to barn; fields, by springs and river. A branch of the Chenango river flows through this farm. Occupied by tenant. This farm is 2 miles from the State School of Agriculture at Morrisville, N. Y. Reason for selling, to settle an estate. Price, \$10,000. Terms, part cash, balance on time. Address J. E. Slaughter, executor, Warsaw, N. Y.

No. 276.—Farm of 29 acres; located on Main street of West Eaton; 3 miles from railway station at Eaton, on line of N. Y., O. & W. R. R. Altitude, 1,400 feet. West Eaton has a good school, 2 churches, 2 general stores, post-office, hotel, woolen manufacturing plant. Is near 3 lakes which are well stocked with great variety of fish; 3 miles from New York State School of Agriculture, 30 miles from Syracuse, population 145,293; 18 miles from Oneida, population 9,461; 5 acres truck and fruit land, 1 acre currants. House, 8 rooms. Price, \$1,500. Terms, \$1,000 cash, balance on mortgage. Address D. E. Darrow, owner, West Eaton, N. Y.

TOWN OF FENNER

Population 836

No. 277.—Farm of 50 acres located 5 miles from Cazenovia P. O., R. D. No. 4; 2½ miles from railway station at Blakslee, on line of L. V. R. R.; 1 mile from school; 5 miles from Methodist church; 1 mile from butter factory, cheese factory and milk station. Highways, fair. Surface of farm, level. Soil, limestone. Acres tillable, all. Fruit, 14 apple, 2 pear, plum and cherry trees, and some berries. Best adapted to truck gardening or grain. Fences, wire, in

good condition. Ten-room house, good condition. Outbuildings, new barn, 50x30, has basement with concrete floor; hog house, 16x12; corn crib, 12x8. Watered, house and barns by well; fields by spring. Occupied by owner. Reason for selling, wishes to retire. Price, \$2,500. Terms, \$1,000 cash, balance on mortgage. Address Thomas Kennedy, owner, Cazenovia, N. Y., R. D. No. 4.

No. 278.—Farm of 125 acres; located 2 miles from Cazenovia P. O., on line of L. V. & N. Y. C. R. Rs.; ½ mile from school; 2 miles from churches; 3 miles from butter factory and cheese factory and 1 mile from milk station. Highways, good. Nearest village, Cazenovia, population 1,928, 2 miles distant, reached by highway. General surface, level. Altitude, 1,300 feet. Nature of soil, gravel and loam. Acres used as meadow, 110; in natural pasture, 15. Acres tillable, 115. Adapted to alfalfa, hay, wheat, oats, peas and barley. Fences, mostly wire. House, 1½ stories, painted, with new roof. Outbuildings, 3 barns, 30x40, 26x36 and 34x60, all with new roofs. The largest one has basement stable with concrete floor, stanchions and box stalls. Poultry house. Watered, house by well; barns, by springs, and fields, by brooks. Occupied by tenant. Reason for selling, age and other business. Price, \$7,000. Terms, easy. Address J. L. O'Hara, owner, Cazenovia, N. Y.

No. 279.—Farm of 260 acres; located 2½ miles from Cazenovia P. O., on line of L. V. & N. Y. C. R. Rs.; 1 mile from school and milk station; 2½ miles from churches; 3 miles from butter factory and cheese factory. Highways, good. Nearest village, Cazenovia, population 1,928, 2½ miles distant, reached by highway. General surface, slightly rolling. Altitude, 1,300 feet. Nature of soil, loam. Acres that can be used as meadow, 180; in natural pasture, 80; in timber, some maple and elm. Acres tillable, 210. Fruit, some apples. Adapted to hay, oats, barley, wheat, peas and corn. Fences, mostly wire, in good condition. House, 2 stories, frame, with 10 rooms, in good condition and also a new 8 room tenant house. Outbuildings, basement barn, 32x100, with concrete floor and stanchions; barns, 24x80, 30x40 and 20x100, and poultry house, 20x28, in good repair. Watered,

house and barns, by running spring water; fields, by brooks. Occupied by owner. Reason for selling, advanced age. Price, \$9,000. Terms, $\frac{1}{3}$ cash and remainder on time. Address J. L. O'Hara, owner, Cazenovia, N. Y.

TOWN OF HAMILTON

Population 3,651

No. 280.— Farm of 91 acres; located $4\frac{1}{2}$ miles from Poolville P. O., R. D. 1; 3 miles from Hubbardville railway station, on line of D., L. & W. R. R.; $\frac{1}{4}$ mile from school; $1\frac{1}{2}$ miles from churches; 3 miles from milk station. Nearest village, Hamilton, 7 miles distant, population 1,586, reached by good highway. General surface, rolling. Altitude, 1,450 feet. Nature of soil, clay loam. Acres in meadow, 55; in pasture, 20; in timber, 16, maple, beech and hemlock; acres tillable, 55. Fruit, 40 apple trees, pears, plums. Best adapted to corn, oats, potatoes and hay. Fences, wire, good condition. House, 14 rooms, good condition. Outbuildings, barn, 34x62; barn, 22x26, with basement and concrete floors, garage 20x24, silo, sugar house and poultry house, painted, good condition. House watered by artesian well; barns, by running water; fields, by spring and brook. Occupied by owner. Reason for selling, ill health. Price, \$4,000. Terms, cash preferred. Address H. S. Dresser, owner, Poolville, N. Y.

TOWN OF LEBANON

Population 1,116

No. 281.— Farm of 200 acres; situated $1\frac{1}{2}$ miles from Lebanon P. O. and railway station, on line of N. Y. C. R. R., R. D. 2 from Lebanon. Highways, good. Acres in meadow, 75; acres in timber, 20, mostly sugar maple, some beech and basswood. Acres tillable, 150. Fruit, pears, cherries, plums and apples. Adapted to oats, corn, barley, buckwheat, peas, potatoes, timothy, clover and alfalfa. Fences, board, woven wire and barbed wire. House, 30x40, with wing, 2 stories, in good condition. Barn, 40x111, with 25-foot posts, wing, 30x40; an ice house; milk room; a small house for hired man; a new silo; all in good condition. Watered, house, by well, pump inside; barns, spring water, inside; fields, by springs and streams. Occupied by owner. Reason for selling, old age. Price, \$10,000. Terms, $\frac{1}{3}$ or more, cash, balance on mortgage at 5%. Address John Fisk, owner, Lebanon, N. Y.

No. 282.— Farm of 296 acres; located $1\frac{1}{2}$ miles from Lebanon P. O., R. D. 2, and railway station, on line of W. S. R. R., Chenango branch; $\frac{1}{2}$ mile from school; $1\frac{1}{2}$ miles from churches and milk station; 3 miles from milk condensing plant. Highways, somewhat hilly, but good. Nearest city, Norwich, population 8,342, 18 miles distant, reached by rail and highway. Surface of farm, level and rolling. Altitude, 1,200 feet. Soil, Miami stony loam. Acres in meadow, 60; in natural pasture, 100; in timber, 50, beech, maple and hemlock, first and second growth; acres tillable, 200. Fruit, 50 apple trees. Adapted to hay, corn, cabbage, fruits and dairying. Fences, woven and barbed wire, good condition. House, 12 rooms, woodshed attached, good condition, convenient for 2 families. Outbuildings, basement barn, silo, poultry house, hog house and milk house, all in good condition. Watered by well, springs and brook. Occupied by owner. Price, \$6,000. Price includes farming implements. Terms, \$3,000 cash, balance on mortgage. Address Mary M. Collier, owner, Earlville, N. Y., R. D. 2.

TOWN OF NELSON

Population 1,230

No. 283.— Farm of 192 $\frac{1}{2}$ acres; located 1 mile from Erieville P. O.; 1 mile from railway station at Erieville, on line of N. Y. C. R. R.; 1 mile from school, churches, butter factory, cheese factory and milk station. Highways, good. Nearest village, Erieville, population 202, 1 mile distant, reached by highway. Surface of farm, rolling. Altitude, 1,700 feet. Soil, loam. Acres in meadow, 70; in natural pasture, 70; balance in timber, beech, birch, maple, hemlock, basswood; acres tillable, 140. Fruit, apples and pears. Best adapted to corn, potatoes and hay. Fences, good. House, 2 stories, in good condition. Cow barn, basement, 32x80. Watered, house by well; fields, by living springs. Occupied by tenant. Reason for selling, ill health. Price, \$26 per acre. Address N. E. Richards, owner, Nelson, N. Y. Owner will rent.

No. 284.— Farm of 45 acres; located 4 miles from Morrisville P. O., R. D. No. 2; 6 miles from railway station at Cazenovia, on line of L. V. and N. Y. C. R. Rs.; 1 mile from school; 2 miles from churches, butter factory, cheese factory and milk station. Highways, state road.

Nearest city, Syracuse, population 145,293, 6 miles distant, reached by highways. General surface, rolling. Altitude, 1,200 feet. Nature of soil, good. Acres that can be used as meadow, 30; in natural pasture, 15; in timber, 5, maple, hemlock, cherry and white ash. Acres tillable, 35. Fruit, 30 apple trees. Adapted to grain, corn, potatoes, wheat and hay. Fences, wire and rail, good condition. House, 24x40, 10 rooms, in good condition. Outbuildings, barns, 54x42 and 16x24, in good condition. House watered by well, barns by well, fields by spring. Occupied by owner. Reason for selling, old age. This farm is 4 miles from State School of Agriculture at Morrisville. Price, \$2,300. Terms, \$1,500 cash, balance on mortgage. Address David Francis, owner, Morrisville, N. Y., R. D. No. 2.

No. 285.— Farm of 110 acres; located 4 miles from Erieville P. O., R. D. 1; 4 miles from railway station at Erieville on line of Chenango branch of N. Y. C. & H. R. R. R.; $\frac{1}{4}$ mile from school and churches; $\frac{1}{2}$ mile from butter factory and cheese factory; 4 miles from milk station. Highways, hilly, but good. Nearest village, Cazenovia, population 1,928, 7 miles distant, reached by highway. Surface of arm, rolling. Soil, loam. Acres in meadow, 30; in natural pasture, 40; in timber, 40, maple, beech and hemlock; acres tillable, 69. Fruit, 30 apple, 3 pear, 4 plum trees and 1 cherry tree. Best adapted to hay, grain and dairying. Fences, wire, in good condition. House, 12 rooms, 2 stories, in good condition. Barn, 50x32, in good

condition. Watered, house and barn, by well; fields, by springs and stream. Occupied by owner. Reason for selling, poor health of owner. Price, \$32 per acre. Terms, \$1,500 cash, balance on easy terms. Address N. E. Richards, owner, Nelson, N. Y.

TOWN OF STOCKBRIDGE

Population 1,544

No. 286.— Farm of 200 acres; 1 mile from Stockbridge P. O., R. D.; 1 mile from railway station at Valley Mills, on line of N. Y., O. & W. R. R.; 1 mile from school and churches; $\frac{3}{4}$ mile from cheese factory; 1 mile from milk station. Highways, good. Nearest city, Oneida, population 9,461, 8 miles distant, reached by rail or highway. Surface of farm, level and sloping. Altitude, 300 feet. Soil, gravel and clay loam. Acres in meadow, 50; in natural pasture, 50; in timber, 20, maple, basswood, hemlock, etc. Acres tillable, 175. Fruit, 1,000 apple, 20 pear, 20 cherry, and 10 plum trees. Adapted to corn, hops, alfalfa, wheat, oats, etc. Fences, woven and barbed wire. House, 14 rooms, in good condition. Outbuildings, four barns in first class condition, stable room for 40 head of cattle, silos, milk house, poultry house, hog pen, ice house and hop house. Watered, house and barns, by running spring water; fields, by brooks and springs. Occupied by owner. Reason for selling, wish to retire. Price, \$25,000. Terms, $\frac{1}{4}$ cash, balance on mortgage. Address J. E. Quackenbush, owner, Stockbridge, N. Y. Owner will rent.

MONROE COUNTY

Area, 721 square miles. Population, 319,310. Annual precipitation, 37.5 inches. Annual mean temperature, 49.9°. Number of farms, 5,971. County seat, Rochester.

This county lies in the western part of the state and is bounded on the north by Lake Ontario. It is considered the richest agricultural county in the state. It is intersected by the Genesee River which flows northward and enters the lake seven miles north of Rochester. The county is also well drained by several other streams and creeks.

The surface is nearly level; clay loam soil predominates in the northwestern part of the county and a rich gravelly loam is found in the valleys drained by the Irondequoit and Genesee Rivers. Eighty-nine and three-tenths per cent. of the land area is improved. There are extensive deposits of gypsum, iron ore, water lime and Medina sandstone in the county. It ranks first in the production of apples and wheat, second in peaches and potatoes, third in currants, beans, barley and oats and fourth in strawberries and raspberries. The principal crops are corn, 779,032 bushels; oats, 1,385,560 bushels; wheat, 866,903 bushels; barley, 73,960 bushels; rye, 101,568 bushels; dry beans, 241,502 bushels; potatoes, 2,796,728 bushels; hay and forage, 97,959 tons. The average size of farms is 64 $\frac{1}{2}$ acres. The total valuation of farm property is \$59,764,614, an increase in value of 49.3 per cent. during

FIG. 39.—HOUSE ON FARM NO. 281, TOWN OF LEBANON, MADISON COUNTY.

FIG. 40.—BUILDINGS ON FARM NO. 282, TOWN OF LEBANON, MADISON
COUNTY.

100

the past ten years. The average value of land per acre is \$87.92, an increase of \$23.80 during the last decade. The value of improved land is \$113.88 per acre. Domestic animals are as follows: Dairy cows, 17,198; horses, 20,639; swine, 21,786; sheep, 30,700; poultry, 300,139; production of milk, 8,702,188 gallons. The value of all dairy products is \$733,397. Rochester and Buffalo furnish unlimited markets for the produce of the farmers. The county is intersected by the Erie Canal (now being enlarged into a barge canal), by three lines of the New York Central & Hudson River Railroad, also the West Shore; Buffalo, Rochester & Pittsburg; the Pennsylvania and Lehigh Valley railroads and two branches of the Erie railroad. Trolley lines extend in all directions from Rochester, a city of 248,465 inhabitants.

Monroe is noted the country over for its nurseries. It grows annually an immense quantity of seeds, plants and trees. There are 200 district schools, excellent high schools in villages and towns with a state normal school located at Brockport. There are 115 miles of state and county roads and 1,077 miles of improved highways. Twenty-six agricultural organizations are devoted to the interest of the farmer.

TOWN OF CHILI

Population 2,060

No. 292.— Farm of 154 acres; located 3 miles from Scottsville P. O., R. D., and railway station on line of B., R. & P. R. R.; 1½ miles from school; 2 miles from churches and 3 miles from milk station. Highways, good. Nearest city, Rochester, population 248,465, 8 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, all. In natural pasture, 20; in timber, 5, all kinds. Acres tillable, 129. Fruit, small apple orchard. Adapted to general farming or dairying. Fences fair, mostly woven wire. Two houses, 8 and 11 rooms respectively, good condition, new furnace installed. Outbuildings: 3 barns, 36x50, 36x42, 36x44, shed 24x50, also garage. Windmill. Occupied by owner. Reason for selling, other business. Price, \$13,000. Terms, \$8,000 cash, balance on mortgage. Address Dugald Brooks, owner, Scottsville, N. Y.

TOWN OF CLARKSON

Population 1,667

No. 293.— Farm of 208 acres; located 3 miles from Holley P. O.; and railway station, on line of N. Y. C. R. R.; 1 mile from school; 3 miles from churches and cheese factory. Highways, improved state roads. Nearest city, Rochester, population 248,465, 21 miles distant, reached by rail and highway. General surface of farm, level and slightly rolling. Acres that can be used as meadow, 140; in pasture, 65; in timber, 25, oak, elm, ash and hickory. Acres tillable, 150. Fruit, 4 acres of apples, 12 of peaches and 1 acre of sour cherries. Best adapted to fruit, vegetables, grains and live stock. Fences, woven wire, good condition. House, brick, 12 rooms, modern plumbing. Outbuildings, gambrel roofed barn 100x35, ell 67x25, with basement under both, nearly new. Watered, house by well and cistern, barns by well and fields by stream. Occupied by owner. Reason for selling, ill health, would exchange for smaller farm. Price, \$20,000. Terms, ⅓ cash, balance on mortgage, \$500 per year on the principal. Address Irving W. Crandall, owner, Kendall, N. Y.

MONTGOMERY COUNTY

Area, 396 square miles. Population, 61,030. Annual precipitation, 36.95 inches. Annual mean temperature, 49.3°. Number of farms, 2,189. County seat, Fonda.

This county is situated in the eastern part of the state in the Mohawk Valley which traverses the county through its center from east to west. It is also drained by the Schoharie River. Most of the surface is undulating interspersed with level stretches, but the long and fertile valley of the Mohawk is level. The soil in this valley is a rich black loam with areas of gravelly loam. In the rolling lands in the southern part of the county, limestone and black slate are much in evidence, giving high adaptation to pasturage. Quarries of Trenton limestone and other good building stone are found in the county.

While adapted to all kinds of farming, the leading crops were: corn, 38,357 bushels; oats, 726,120 bushels; buckwheat, 133,434 bushels; potatoes, 193,644 bushels; hops,

148,329 pounds; hay and forage, 130,173 tons. Total valuation of all farm property is \$15,460,574, an increase of 19.6 per cent. over the last census. Montgomery is another of the many counties of the state where the price of land should double in value in the next ten years; the present value of improved lands being \$50.51 per acre and of the land alone, \$26.92. Domestic animals are reported from almost every farm in the county classified as follows: Dairy cows, 22,804; horses, 7,639; swine, 9,098; sheep, 3,902; poultry, 143,302; milk produced, 13,135,104 gallons; value of all dairy products, \$1,277,634.

The county is intersected by the Erie canal, the New York Central & Hudson River, Fonda, Johnstown & Gloversville, and West Shore railroads. Electric lines also connect Fonda, Johnstown, Gloversville and Amsterdam with Albany, Schenectady and Troy. Amsterdam, the metropolis of the county, has a population of 34,319, contains two academies, large carpet mills, knitting mills and other industries. There are ample home markets for garden truck, fruit and other products of the farm. There are 109 district schools, 11 agricultural societies and organizations, 70 miles of state and county roads and 635 miles of other improved highways.

TOWN OF CANAJOHARIE

Population 4,023

No. 287.—Farm of 175 acres; located $4\frac{1}{2}$ miles from Canajoharie P. O., R. D. No. 2 and railway station, on line of N. Y. C. & W. S. R. Rs.; $\frac{1}{4}$ mile from school; $1\frac{1}{2}$ miles from churches; 2 miles from cheese factory and $4\frac{1}{2}$ miles from condensing plant. Highways, $1\frac{1}{2}$ miles of dirt road and 3 miles of macadam. Nearest city, Amsterdam, population 34,319, 25 miles distant, reached by rail and highway. Altitude, about 800 feet. Nature of soil, Mohawk silt loam and clay. Acres that can be used as meadow, 150; acres now used as meadow, 70; in natural pasture, 35; in timber, 20, hemlock, beach, etc. Acres tillable, 150. Fruit, 60 apple, 10 pear, 12 plum, 5 cherry and 2 peach trees, 6 grape vines, etc. Adapted to dairying or stock raising. Fences, barbed wire. House, main house 10 rooms, good condition, annex fair. Outbuildings, barn 45x93, fair; wagon house, 35x30; hog pen, 12x20, good; 4 other outbuildings; barn has stalls for 30 cows. Watered, house by wells and cisterns, barn yards running water and fields running water. Occupied by tenant. Price, \$5,500. Terms, \$2,500 cash, balance on mortgage. Milk collected at the door. Address Chester Seeber, owner, Canajoharie, N. Y.

TOWN OF GLEN

Population 2,065

No. 288.—Farm of 250 acres, located 3 miles from Glen P. O., R. D.; $3\frac{1}{2}$ miles from railway station at Auriesville on line of W. S. R. R.; $1\frac{1}{2}$ miles from school; 3 miles from churches and milk station. Nearest city Amsterdam,

8 miles distant, population 34,319, reached by rail and highway. General surface, rolling and level. Nature of soil, black slate loam. Acres in meadow, 200; in pasture, 28; in timber, 20, red and white oak. Acres tillable, 200. Fruit for family use. Adapted to wheat, barley, oats, alfalfa and clover. Fences, wire, in fair condition. House, 25x30, fair condition. Outbuildings: barn 36x80 with basement, hay barn 28x80 with 20-ft. posts. All new. House watered by well, barns by running water, fields by brook. Occupied by tenant. Reason for selling, ill health. Price, \$15,000. Terms, $\frac{1}{2}$ cash. Address E. J. Bell, owner, Fultonville, N. Y. Will rent on shares.

No. 289.—Farm of 152 acres; located 5 miles from Fultonville P. O., R. D. No. 1; 4 miles from railway station at Randall, on line of W. S. R. R.; $\frac{1}{2}$ mile from school; 2 miles from church; 2 miles from butter factory; $\frac{1}{2}$ mile from cheese factory; 5 miles from milk station and condensing plant. Highways, good. Nearest village, Fultonville, population 955, 5 miles distant, reached by highway. General surface, smooth and a little rolling. Nature of soil, loam mixed with clay. Acres that can be used as meadow, 125; in timber, 22, beach, maple, hemlock and ash. Acres tillable, 125. Fruit, 30 plum and 35 apple trees. Best adapted to hay, oats and corn. Fences, barbed wire, with white oak posts, good condition. House, 20x40 with wing 18x35, good condition. Outbuildings, good barn 32x78; cow barn 28x48; horse barn 23x52; tool house 20x36; wagon house 25x40; corn crib and hog house. Watered, house by well, barns, running water and fields same.

Occupied by tenant. Reason for selling, old age. Price, \$6,700. Terms, $\frac{1}{4}$ cash, balance on mortgage. Address Orville H. Hall, owner, Fultonville, N. Y.

TOWN OF PALATINE

Population 2,449

No. 290.— Farm of 150 acres; located 4 miles from Canajoharie, P. O.; 2 miles from railway station at Sprakers, on line of the N. Y. C. railway; $\frac{1}{8}$ mile from school; 4 miles from churches; $\frac{1}{2}$ mile from butter factory, $\frac{1}{2}$ mile from cheese factory, 4 miles from milk stations, 8 miles from condensing plant. Highways, good, macadam part of way. General surface, level. Nature of soil, loam, good rich soil. Acres used as meadow, 130; in timber, 20, hemlock. Acres tillable, 130. Fruit, 50 trees consisting of plums, pears, cherries and apples. Adapted to hay and grain. Fences, wire and stone wall, good condition. House, 15 rooms, good condition; built for two families. Barn, 50x60, good condition; large hog pen and corn crib. House, barns and fields watered by well. One and one-quarter miles from Mohawk River; 3 miles from Adirondack Mountains. Reason for

selling, other business. Price, \$7,000. Terms, $\frac{1}{4}$ cash. Will rent for term of years or annually with option to buy. Address J. I. Spraker, trustee, Fonda, N. Y.

TOWN OF ROOT

Population 1,327

No. 291.— Farm of 192 acres; located 3 miles from Randall, on line of W. S. R.R.; 2 miles from school and churches; $2\frac{1}{4}$ miles from butter factory and cheese factory; 3 miles from milk station. Highways, dirt road in good condition. Nearest village, Canajoharie, population 2,474, 9 miles distant, reached by rail and highway. General surface, mostly level. Acres that can be used as meadow, 145; in natural pasture, 25; in timber, 18, hemlock and hardwood. Acres tillable, 145. Fruit, a few cherry and apple trees. Best adapted to hay and grain. Fences, mostly wire in fair condition. House, 12 rooms, in fair condition. Outbuildings, hay barn, horse and dairy barn. Watered, house by well and cistern; barns by well and fields by spring. Occupied by tenant. Reason for selling, old age. Price, \$3,700. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address Furman Frank, Sprakers, N. Y.

NIAGARA COUNTY

Area, 504 square miles. Population, 104,550 Annual precipitation, 29.6 inches. Annual mean temperature, 48.6°. Number of farms, 4,346. County seat, Lockport.

This county is located in the western part of the state, bordering on Canada, separated by the Niagara River and the famous Niagara Falls. Its northern boundary is Lake Ontario.

The surface of the northern part of the county is quite level, but in the southern and eastern portions are found gentle undulations; more than one-half of the surface, however, is level. A rich, sandy and gravelly loam is found on a strip of land extending from the lake to the interior of the county about ten miles in width. A strong clay loam, very productive, is found in the southern portions of the county. Niagara limestone is extensively quarried in some sections. The county is adapted to all forms of agriculture. It is especially noted as being one of the greatest counties of the country in the production of apples, pears, peaches, quinces, etc., producing these in enormous quantities from orchards kept in the highest state of cultivation. In crops there were produced 728,478 bushels of corn; 996,239 bushels of oats; 577,082 bushels of wheat; 32,237 bushels of barley; 73,273 bushels of dry beans; 663,192 bushels of potatoes, and 82,448 tons of hay and forage. The total value of farm property is \$39,665,809, an increase of 69 per cent. over the census of 1900. This increase is exceeded by only one agricultural county in the state. The average value of improved lands, including buildings, is \$111.12 per acre and the average value of farm land per acre is \$74.85, an increase of \$29.15 per acre in the last decade. The county reports dairy cows, 13,058; horses, 15,510; swine, 17,502; sheep, 28,241; poultry, 261,290; production of milk, 6,098,086 gallons, amounting to \$448,356. Buffalo with its nearly half a million inhabitants, only twenty-five miles from the center of the county, furnishes ample market for products. The county is traversed by the Erie Canal and several important railroads and electric lines. The city of Niagara Falls contains many large manufacturing establishments and hotels, which during the summer months are filled with tourists.

Lockport contains six flour mills and numerous saw mills. There are 155 district schools in the county, which with the many high schools, De Veaux College and Niagara University furnish exceptional educational advantages for the students. Eight agricultural organizations are devoted to the best interests of the farmer. The county has 62 miles of state and county roads and 387 miles of improved highways. The county ranks third in the production of wheat and fourth in corn.

TOWN OF PORTER

Population 2,504

No. 294.— Farm of 96 acres; $3\frac{1}{2}$ miles from Ransomville P. O., R. D. 24 and railway station on line of R., W. & O. R. R.; $\frac{3}{4}$ mile from school; $3\frac{1}{2}$ miles from churches and milk station. Highways, good. Nearest large village, Ransomville, population 700. Surface, level.

Soil, clay loam. Acres in timber, 8, beech and maple; acres tillable, 88. Fruit, 2 acres of pear, 14 acres of apple trees. Farm is on shore of Lake Ontario. House, 9 rooms, new. New barn. Watered by wells. Occupied by tenant. Reason for selling, owner non-resident. Price on application. Address T. E. Lockhart, owner, Troy, N. Y.

ONEIDA COUNTY

Area, 1,196 square miles. Population, 167,331. Annual precipitation, 44 inches. Annual mean temperature, 47.9° . Number of farms, 6,929. County seat, Utica.

This county is centrally located and is bounded on the southwest by Oneida Creek and Oneida Lake. It is drained by the Mohawk and Black Rivers and by Oriskany, Fish and West Canada Creeks. In the region around and extending east of Oneida Lake, the surface is level. The hills of the northern part are formed in long, broad ridges, elevation from 200 to 600 feet. The soil in this section is a sandy and gravelly loam, very productive. In the low hills near the valley, clay loam is found, while on the higher elevations of the northeastern part, gravelly loam predominates. Among the leading minerals of the county are gypsum, iron ore and hydraulic limestone. Oneida is one of the leading farm counties of the state, some of the principal crops being corn, 402,688 bushels; oats, 721,449 bushels; barley, 25,105 bushels; buckwheat, 54,411 bushels; potatoes, 1,192,575 bushels; hops, 1,804,878 pounds; hay and forage, 321,802 tons. The total value of farm property is \$38,437,991, an increase of 44.1 per cent. over the value of 1900. The average price of improved land throughout the county is \$42.81. The county reports 64,779 dairy cows; 16,652 horses; 18,661 swine; 6,510 sheep; 276,642 poultry. There are also reported about 35,000 head of cattle, exclusive of dairy cows. There were produced 35,045,439 gallons of milk and the total receipts from all dairy products were \$3,401,563. There are 169 milk stations distributed over the county. Oneida county is intersected by the Erie and Black River Canals and by the New York Central & Hudson River; Delaware, Lackawanna & Western; Rome, Watertown & Ogdensburgh, and West Shore railroads, all of which center at Utica. The cities of Utica and Rome furnish ample markets; and New York City is a ready market for all export products. There are 358 district schools and at Clinton is located Hamilton College, a well-known institution of high character. There are 125 miles of state and county roads and 2,100 of improved highways; also 22 agricultural societies to assist the farmer with his work. The county ranks third in hops, third in the production of hay and forage and third in the production of milk.

TOWN OF ANNSVILLE

Population 1,450

No. 295.— Farm of 120 acres; 8 miles from Camden P. O., R. D., and railway station, on line of N. Y. C. & H. R. R.; $1\frac{1}{2}$ miles from school; $2\frac{1}{2}$ miles from church; $1\frac{1}{2}$ miles to cheese factory. Highways, fair. Nearest village, Camden, population 2,181, 8 miles distant, reached by highway. Surface of farm, rolling. Altitude, 900 feet. Soil,

gravelly loam. Acres in meadow, 25; in natural pasture, 25; in timber, 70, hemlock, spruce, ash, beech, maple and birch. Acres tillable, all but woodland. Fruit, 24 apple and 8 plum trees. Adapted to potatoes, corn, oats and buckwheat. Fences, wire and stone, in fair condition. House, 22x28, needs some repairs, with wing, 16x16, unfinished, and woodshed, 16x18. Outbuildings: basement barn, 30x40; hog pen, 15x25; corn house,

FIG. 41.— BUILDINGS ON FARM NO. 306, TOWN OF PARIS, ONEIDA COUNTY.



12x20; poultry house, 12x16, fair condition. Watered, house by springs, barns and fields by springs. Occupied by owner. Reason for selling, ill health. Price, \$3,500. Terms, cash. Address, M. L. Stanford, Camden, R. F. D. No. 5, N. Y.

TOWN OF AVA

Population 659

No. 296.—Farm of 330 acres; located $4\frac{1}{2}$ miles from Boonville P. O., R. D. No. 4; 5 miles from railway station at Boonville, on line of N. Y. C. R. R.; $\frac{1}{8}$ mile from school; $4\frac{1}{2}$ miles from churches; 2 miles from butter and cheese factory and 5 miles from milk station. General surface, level to rolling. Altitude, 1,300 feet. Nature of soil, slate loam, good. Acres that can be used as meadow, 125; acres now used as meadow, 110; in natural pasture, 200; in timber, 30, hard wood. Acres tillable, 200. Adapted to oats, corn, hay and potatoes. Fences, wire, fairly good. House, 30x30, 2 story frame, painted. Outbuildings, cow barn 36x100, with basement and concrete floors; stanchions for 50 to 60 cows; horse barn 30x40, with basement for hogs. Watered, house by pump; barns, same and fields by running stream. Occupied by tenant. Reason for selling, to close an estate. Price, \$10,000. Terms, \$2,000 cash, balance on mortgage. Price includes 30 to 40 head of stock, hay, etc. Address B. A. & A. C. Capron, owners, Boonville, N. Y.

TOWN OF DEERFIELD

Population 1,836

No. 297.—Farm of 157 acres, 1 mile from North Gage; $2\frac{1}{2}$ miles from Barneveld station, on line of N. Y. C. R. R., R. D. from Barneveld; 10 miles from Utica, population, 80,589. Soil, clay loam, slate and limestone. Acres in meadow, 55; in pasture, 80; in timber, 20; 2 acres in orchard and yard. Acres tillable, 125. Fruit, a few apples and pears. Medium-sized house, 32x25, 2 wings and woodshed, in first-class condition; 2 barns, 1, 90x40, concrete floor, watering basins; also silo, horse barn, 54x32, and outbuildings, in good repair. Watered by brooks, spring and 2 wells. Fences, post and wire, in good condition. A macadamized county road leading north from Utica, is near the farm. Reason for selling, advanced age of owner. Price, \$11,500. Terms, $\frac{1}{2}$ cash, balance on mortgage. One share in the

Trenton, N. Y. Milk and Cream Company will be transferred to the purchaser. Address John K. Walker, owner, Holland Patent, N. Y.

TOWN OF FLORENCE

Population 970

No. 298.—Farm of 85 acres, located 8 miles from Camden P. O. R. D. No. 4, and railway station on line of R. W. & O. R. R.; $\frac{1}{2}$ mile from school, churches, butter factory and cheese factory and 8 miles from milk station. Highways, hilly. General surface of farm, rolling. Altitude, 700 feet. Nature of soil, gravelly loam. Acres used as meadow, 25; in natural pasture, 40; in timber, 20, hard wood, mostly second growth. Acres tillable, 45. Fruit, 12 apple trees, currants and raspberries. Adapted to corn, potatoes, oats and hay. Fences, stone and wire, good condition. Nine room house and wood shed. Outbuildings: cow barn 26x50, good condition, horse barn 22x30, good condition. House watered by well, barns by stream, fields by trout stream. Occupied by owner. Reason for selling, old age. Price, \$2,500. Terms, \$1,500 cash, balance on mortgage. Price includes 7 cows, 3 head of young stock, poultry and farm tools. Address J. H. Stanford, owner, Camden, N. Y.

No. 229.—Farm of $117\frac{3}{4}$ acres; located $3\frac{1}{2}$ miles from Camden P. O., R. D. No. 5 and railway station, on line of N. Y. C. & L. V. R. Rs.; $\frac{1}{4}$ mile from school; 1 mile from church; $3\frac{1}{2}$ miles from butter factory; $\frac{1}{4}$ mile from cheese factory and $3\frac{1}{2}$ miles from milk station. Highways, crushed stone road, good. General surface, rolling, greater part level. Altitude, 900 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 75; in natural pasture, $25\frac{3}{4}$; in timber, 17, hardwood, some hemlock. Acres tillable, 75. Fruit, 50 apple and a few plum and pear trees. Adapted to potatoes, oats, buckwheat, corn, beans, etc. Fences, mostly wire, good condition. House, 10 rooms, nearly new, water and sink in kitchen, hard wood finish. Outbuildings, concrete basement barn 30x40; 2 good hog houses; wagon house; poultry house, etc., good condition. Watered, pump in house, fields, by springs and creek. Occupied by owner. Reason for selling, death in family. Price, \$3,700. Terms: Mortgage, \$2,450, 5 per cent; \$800 cash,

balance on easy terms. Mrs. N. L. Hoover, owner, Camden, N. Y., R. D. No. 5.

TOWN OF FLOYD

Population 702

No. 300.—Farm of 203 acres; located $2\frac{1}{2}$ miles from Holland Patent P. O., R. D. No. 1, and railway station, on line of U. & B. R. line of N. Y. C. R. R.; $\frac{1}{2}$ mile from school; $2\frac{1}{2}$ miles from churches; 4 miles from butter factory; 2 miles from cheese factory; $2\frac{1}{2}$ miles from milk station and condensing plant. Highways, good dirt road. Nearest city, Utica, population 80,589, 15 miles distant, reached by rail and highway. General surface, level, sloping toward south. Altitude, 1,030 feet. Nature of soil, good clay loam. Acres that can be used as meadow, 100; in natural pasture, 75; in timber, 40, hemlock, maple, beech, birch, etc. Acres tillable, 125. Fruit, 56 apple trees, pears, plums and cherries. Adapted to potatoes, oats, barley, peas and corn. Fences, woven and barbed wire, in good condition. House, 18 rooms, hot water furnace, in good condition. Outbuildings: barns, 30x60, 25x50, 26x40; poultry house and granary, 36x16; milk and ice house, 16x24. House watered by running spring, barns by the same, fields by springs and brooks. Occupied by owner. Reason for selling, other business. Price, \$12,000. Terms, \$4,000 cash, balance on easy payments. There is to be a state road within $\frac{1}{2}$ mile and a county road to connect. Address A. J. Kirkland, owner, Holland Patent, N. Y.

No. 301.—Farm of 163 acres; located 4 miles from Holland Patent; $3\frac{1}{2}$ miles from Stittville, on line of N. Y. C. R. R.; $\frac{1}{4}$ mile from school and cheese factory; 4 miles from churches, milk station and condensing plant. Highways, dirt and state road. Nearest city, Rome, population 21,926, 8 miles distant, reached by rail and highway. General surface, quite level. Nature of soil, clay loam. Acres that can be used as meadow, 75; in natural pasture, 88. Acres tillable, 95. Adapted to hay, corn, oats and potatoes. Fences, wire and board, in fair condition. House, 30x35 with wing 20x25. Outbuildings, dairy barn 45x65, in fair condition. Watered, house, by well; barns, by running water; fields, by creek. Occupied by tenant. Reason for

selling, other business. Price, \$4,300. Terms: \$1,000 cash and remainder on mortgage. Address Lilian M. Potter, owner, Holland Patent, N. Y. Owner will rent.

TOWN OF LEE

Population 1,313

No. 303.—Farm of 202 acres; located $2\frac{1}{2}$ miles from Lee Center P. O., R. D., stage to Point Rock and Rome; 10 miles from railway station at Rome on line of N. Y. C. R. R.; $\frac{1}{8}$ mile from school; $2\frac{1}{2}$ to 4 miles from churches; $2\frac{1}{2}$ miles from canning factory; $\frac{1}{2}$ mile from cheese factory. Highways, good. General surface, slightly rolling. Altitude, 700 ft. Nature of soil, black muck and sandy, good. Acres in meadow and cropping, 75; in natural pasture, 125; in timber, none. All tillable. Fruit, apples, pears, grapes and plums. Adapted to hay, corn, oats and canning peas. Fences, barbed wire and stone wall. House, 13 rooms, in good condition. Outbuildings: barn No. 1, 45x70; No. 2, 30x50; horse barn, 30x50; hay house, 20x42, and other buildings, in good condition. House watered by well in house, barns by running water in yard, fields by creek and never failing spring. Occupied by tenant. Reason for selling, to close an estate. Price, \$6,000. Terms, cash preferred or would take mortgage for 50% of selling price. On line of Rome & Osceola R. R., now building, with station at Lee Center and prospects of milk station on farm. Address C. H. Zimmer, executor D. C., Constableville, Lewis Co., N. Y.

TOWN OF MARCY

Population 1,260

No. 304.—Farm of 112 $\frac{1}{2}$ acres; located 3 miles from Marcy P. O., R. D. 2, and railway station on line of Black River R. R.; $\frac{3}{4}$ mile from school; $2\frac{1}{2}$ miles from churches; 4 miles from milk condensing plant; 3 miles from milk station. Highways somewhat hilly but good. Nearest city, Utica, 5 miles distant, population 80,589, reached by rail or highway. Surface of farm, part hilly and part level. Good soil. Acres in meadow, 56; in natural pasture, 50; in timber, 6, beech, birch, maple, ash, elm and hemlock. Acres tillable, 70. Fruit, 24 apple trees, also pears, plums, cherries, grapes and currants. Adapted to hay, corn, oats, potatoes, etc. Fences, wire, good condition. House, 8 rooms,

old but in good condition, woodshed attached. Outbuildings: barn, 26x40; barn, 30x54, shed attached; store house, 18x24, with hog house, 20x24 annexed, in fair condition. Watered, house, by wells; barns, by creek; fields, by creek and springs. Occupied by owner. Reason for selling, other business. Price, \$5,000. Terms, cash or part cash, balance on mortgage. Address Mrs. Margaret J. Jones, owner, Marcy, N. Y., R. D. 2.

TOWN OF MARSHALL

Population 1,814

No. 305.—Farm of 72 acres; located 3 miles from Waterville P. O., R. D. No. 1 and railway station, on line of D., L. & W. R. R.; $\frac{1}{2}$ mile from school; 2 miles from churches and milk station. Highways, good. Nearest city, Utica, population 80,589, 16 miles distant, reached by rail and highway. Surface of farm, level. Altitude, 1,361 feet. Nature of soil, sandy loam. Acres in meadow, 12; in natural pasture, 20; in timber, 12, variety, mostly young trees. Acres tillable, 40. Fruit, 30 apple. 2 pear, 2 crab apple and one young cherry trees, mostly snow apples. Adapted to hay, hops and potatoes. Fences, wire, rail and stone wall. House, $1\frac{1}{2}$ -stories; 11 rooms, hot and cold water and bath-room. Outbuildings: dairy barn, 30x68, 9-foot stone basement with concrete floor, and old hop house. Silo, 16x24. Occupied by owner and tenant. Reason for selling, to settle an estate. Price, \$7,000. Terms, one-half cash. Water supply inexhaustible, well, drilled 120 feet in solid rock, distributed to house and barn by compressed air pressure. Complete septic tank sewage system. Good cellars, $2\frac{1}{2}$ H. P. gasoline engine for pumping water into air pressure tank, can be used for other farm work. Address Miss Anna Lenggenger, owner, Waterville, N. Y., R. D. No. 1. Will rent with option to buy.

TOWN OF PARIS

Population 3,016

No. 306.—Farm of 200 acres; 10 rods from post office; 100 rods from railway station, on line of D., L. & W. R. R.; 20 rods from school; 15 rods from church; 1 mile from milk station; 8 miles from milk condensing plant. Highways, state road, Surface of farm, level and rolling. Altitude, about 1,200 feet. Soil, gravelly and sandy loam. Acres in meadow, 40; in natural pas-

ture, 10; in timber, 1; acres tillable, 190. Fruit, 3 acres in apples. Best adapted to hops, potatoes, dairying, etc. Fences, wire, good. House, $2\frac{1}{2}$ stories, 16 rooms, bath and toilet on 2 floors, laundry, running spring water, hot and cold water, all city improvements. Outbuildings, in perfect repair, room for 75 head of cattle. Watered by never-failing springs. This farm is 100 rods from Sauquoit Creek. This property is 12 miles from city of Utica on state road. Three tenant houses. Large house was remodeled 6 years ago at cost of \$4,500. Occupied by owner. Reason for selling, failing health and advanced age of owner. Price, \$20,000. Terms, $\frac{1}{2}$ cash. Address J. W. Risley, owner, Cassville, N. Y.

TOWN OF VERONA

Population 3,752

No. 307.—Farm of 134 acres; $3\frac{1}{2}$ miles from Verona station on lines of N. Y. C. and O. & W. R. R.; R. D. 2 from Durhamville; 5 rods from school; $\frac{1}{2}$ mile from churches; 1 mile from creamery; $3\frac{1}{2}$ miles from milk station. Highways, in good condition. Nearest city Oneida, population 9,461, $5\frac{1}{2}$ miles distant, reached by highway. Soil, sand and gravelly loam and muck. Acres in meadow, 50; tillable, 110; natural pasture, 52; timber, 2, maple and ash, second growth. Fruit, pears, plums and apples. Adapted to hay, corn and oats. Fences, wire, in good condition. House, 2 stories, in good condition. Cow barn, 36x80, 20-foot posts, with 7-foot basement, pine siding, reshungled in 1905 with Washington red cedar shingles; horse barn and wagon house, 36x50, pine siding, slate roof; hog house and poultry house with basement, 20x30, 16-foot posts, 2 floors, used for storage; silo, 20x21x21; cow barn with basement above ground; 2 new poultry houses; all floors in barns and hog house concrete. House built in 1882, well painted, tin roof, concrete cistern under kitchen, 10x10, and 8 feet deep; furnace heat. There is also on the place a shop or tool house, 20x30, 16-foot posts and pine siding; ice-house, wood and store house, 18x20, 14-foot posts and pine siding. All buildings newly painted. Farm will keep from 30 to 35 head of stock and 4 horses. Occupied by owner. Reason for selling, old age. Price, \$10,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address Jerome A. Jackson, owner, Durhamville, N. Y.

No. 308.—Farm of 31 acres; located $1\frac{1}{2}$ miles from Verona P. O.; 2 miles from Verona Station, on line of N. Y. C. R. R.; $\frac{1}{4}$ mile from school; $1\frac{1}{2}$ miles from churches and cheese factory and 2 miles from milk station. Highways, good. Nearest city, Rome, population 21,926, 6 miles distant, reached by rail and highway. General surface, level. Altitude, 500 ft. Nature of soil, good. Acres that can be used as meadow, nearly all; now used as meadow, 20. Acres tillable, nearly all. Fruit, 25 apple, 4 pear, 4 plum, 2 cherry trees, grapes and raspberries. Adapted to hay, oats, corn, wheat, potatoes and alfalfa. Fences, wire, in fair condition. House, 10 rooms, 22x30 with wing 18x20. Outbuildings, basement dairy barn, horse barn attached, tool shed, wagon house and smoke house. Watered, house and barns by well. Occupied by owner. Reason for selling, wants larger farm. Price, \$3,400. Terms, \$1,600 cash, balance on easy terms. Price includes eight head of stock, team, hay and farming tools. Address A. A. Preller, owner, Verona, N. Y.

No. 309.—Farm of 160 acres; located 5 miles from Durhamville; 4 miles from Verona on line of N. Y. C. R. R.; $\frac{1}{2}$ mile from school and cheese factory; $\frac{3}{4}$ mile from churches and butter factory and 4 miles from milk station. Highways, state road. Nearest city, Oneida, population 9,461, 8 miles distant, reached by highway. General surface, level. Nature of soil, loam. Acres that can be used as meadow, 100; in natural pasture, 50; in timber, 10, elm, ash and maple. Acres tillable, 130. Fruit, about 12 apple trees. Adapted to hay, grain and general crops. Fences, wire, in good condition. House, 14 rooms. Outbuildings, large hay, horse and dairy barn. Watered, house and barns by well; fields by creek. Occupied by owner. Reason for selling, other business. Price, \$8,500. Address D. K. Eames, owner, Canastota, N. Y.

No. 310.—Farm of $24\frac{1}{2}$ acres; located 1 mile from Durhamville P. O., R. D. No. 2, and railway station, on line of N. Y., O. & W. R. R.; 1 mile from school; 1 mile from churches; 4 miles from butter factory and milk station. Nearest city, Oneida, population 9,461, $2\frac{1}{2}$ miles distant, reached by rail and highway. General surface, rolling. Nature of soil, dark sandy. Acres that can be used as

meadow, all. All tillable. Fruit, 3 pear, 2 cherry, 3 plum and about 30 apple trees, all young. Asparagus bed, 5x90 feet. Adapted to all kinds of crops. Fences, barbed wire, good condition. Sixteen-room house, 40x28, good condition, wing 27x16. Outbuildings: barn, 32x24, with leanto, 32x14; poultry house, hog house, 12x30, and 3 small brooder houses. House and barns watered by well. Occupied by owner. Reason for selling, ill health. Price, \$3,000. Terms, cash. \$400 may remain on mortgage. Address Charles Collier, owner, Durhamville, N. Y.

No. 311.—Farm of 339 acres; 5 miles from Durhamville P. O., R. D. 2; $2\frac{1}{2}$ miles from railway station at State Bridge on line of N. Y., O. & W. R. R.; $2\frac{1}{2}$ miles from railway station at Sylvan Beach on line of L. V. R. R.; $\frac{3}{4}$ mile from school; 2 miles from church; 1 mile from cheese factory; $2\frac{1}{2}$ miles from condensing plant. Highways, level. Nearest city, Oneida, population 9,461, 7 miles distant, reached by rail and highway. Surface of farm, level and rolling. Soil, sandy loam and clay. Acres in meadow, 100; in natural pasture, 175; in timber, 50, maple, elm and ash; acres tillable, 200. Fruit, apples, cherries and plums. Adapted to hay, corn, oats and buckwheat. Fences, woven wire, barbed wire and rail, good condition. House, 7 rooms, fair condition. Outbuildings: barn, 40x60, with basement; barn, 20x70; corn house; hog house; poultry house and silo, 16x24, good condition. Watered by well and creek. This property is $2\frac{1}{2}$ miles from Sylvan Beach. Occupied by owner. Reason for selling, old age. Price, \$8,000. Address Edgar S. Bennett, owner, Durhamville, N. Y.

TOWN OF WESTERN

Population 1,150

No. 312.—Farm of 74 acres; located 7 miles from Remsen P. O., on line of Black River R. R.; $\frac{1}{4}$ mile from school; 1 mile from churches, butter factory and cheese factory; 7 miles from milk station and 8 miles from condensing plant. Highways, hilly but good. Nearest city, Rome, population 21,926, 12 miles distant, reached by highway. General surface, level and hilly. Altitude, about 720 ft. Nature of soil, clay loam. Acres now used as meadow, about 30; in natural pasture, 38; in timber, 7,



PROOF THAT NEW YORK IS A CORN GROWING STATE.

maple, hemlock, butternut and white ash. Fruit, 70 apple, 2 plum, 1 pear and 1 crab apple tree, strawberries and raspberries. Best adapted to corn, oats and potatoes. Fences, mostly barbed wire. House, 14 rooms, in good condition. Outbuildings, dairy barn, 30x60; horse barn, 24x36; poultry and hog house, 12x36, and tool shed, 20x24. Watered, house by well; barns and fields by creek. Occupied by owner. Reason for selling, wishes a larger farm. Price, \$4,000. Terms: $\frac{1}{2}$ cash and remainder on mortgage. Address J. Cummings, owner, Remsen, N. Y.

No. 313.— Farm of 311 acres; located 7 miles from Westernville P. O.; 7 miles from Alder Creek; 1 mile from school, churches and cheese factory; 5 miles from butter factory; 7 miles from

milk station and 13 miles from condensing plant. Highways, mostly good dirt road and some state road. Nearest village, Boonville, population 1,909, 9 miles distant, reached by highway. General surface, rolling. Acres that can be used as meadow, 125; now used as meadow, 80; in natural pasture, 231; in timber, 100, maple, ash, hemlock, basswood and beech. Acres tillable, 100. Fruit, 150 apple trees. Adapted to hay, oats, potatoes and vegetables. Outbuildings: barn, 100x47, in good condition; barn, 30x40, in fair condition; shed, 18x28, and wood shed, 24x24. Watered, house, by well; barns and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms, \$2,000 cash and remainder at 5 per cent with yearly payment of \$100. Address Lillie L. Hall, owner, Westernville, N. Y.

ONONDAGA COUNTY

Area, 824 square miles. Population, 213,992. Annual precipitation, 46.66 inches. Annual mean temperature, 48.9°. Number of farms, 5,770. County seat, Syracuse.

This county is located in the central part of the state. Its northern shores are bounded by Oneida Lake. Lake Skaneateles forms the southwest boundary. It is excellently drained by the Seneca River and Chittenango and Onondaga Creeks.

Its surface is greatly undulated in the northern part. In the extreme southern part the surface is generally rough and hills extend in long ridges north and south with narrow valleys between. There is a general slope toward the center of the county into the flats of the "great level." In the southern portion we find a clay and dark sandy loam, in the valleys clay loam, in the central and northern portion a rich sandy and gravelly loam. Among the minerals found in this county are salt, iron ore, limestone and gypsum; the Onondaga limestone being an excellent building stone. Salt is obtained from salt wells in the vicinity of Syracuse. The value of the exported product has at times exceeded a million dollars annually. The county is adapted to general farming, the leading products being corn, 707,385 bushels; oats, 1,127,012 bushels; wheat, 173,499 bushels; barley, 166,274 bushels; buckwheat, 82,839 bushels; potatoes, 1,671,835 bushels; hay and forage, 215,058 tons. As in many other counties of the state, alfalfa can be grown with great success. The total value of farm property is \$37,291,043, an increase of 17.5 per cent. in the past ten years. The average price of improved lands is \$67.58 per acre.

Domestic animals reported as follows: Dairy cows, 36,331; horses, 17,128; swine, 21,453; sheep, 17,284; poultry, 302,764; production of milk was 21,035,070 gallons, which with the products of 55 milk stations and factories sold for \$2,063,923. Numerous transportation lines intersect the county. Syracuse, with a population of 145,293 is a large manufacturing center and is the home of Syracuse University. There are 255 district schools well located throughout the county and 29 agricultural societies. The county has 90 miles of state and county roads and 927 miles of other improved highways. Onondaga is one of the progressive counties of the state.

TOWN OF CLAY

Population 2,661

No. 314.— Farm of 102 acres; located $\frac{3}{4}$ mile from Clay P. O., on line of N. Y. C. R. R.; $\frac{3}{4}$ mile from school, churches and butter factory. Highways, stone and state road. Nearest city, Syracuse, population, 145,293, 11 miles distant, reached by rail and highway.

General surface, slightly rolling. Altitude, 600 feet. Nature of soil, black and clay loam. Acres that can be used as meadow, 30; in natural pasture, 12; in timber 12, maple, ash, beech, hickory and cherry. Acres tillable, 90. Fruit, about 100 apple, 12 pear and 6 plum trees. Best adapted to grain, potatoes, hay and cabbage. Fences, woven

and barbed wire. House, main part, 2 stories, 30x36, addition, 16x24, with 11 rooms total. Outbuildings, barn 30x115, 30 feet high, dairy barn 18x105, machine house 20x32, small woodshed and poultry house. Watered, house, by well and cistern; barns, by well, and fields, by springs and streams. Occupied by owner. Reason for selling, ill health. Price on application. Terms, reasonable amount cash and remainder on long time at 5 per cent. Address George McKittrick, Clay, N. Y.

TOWN OF LYSANDER

Population 4,630

No. 315.—Farm of 200 acres; located 2 miles from Lysander P. O., R. D. No. 1; $4\frac{1}{2}$ miles from railway station at Lamson, on line of D. L. & W. R. R.; 2 miles from school, churches and cheese factory. Highways, good. Nearest city, Fulton, population 11,138, 10 miles distant, reached by highway. Surface of farm, rolling. Altitude, 450 feet. Soil, sandy and stony. Acres that can be used as meadow, 140; in natural pasture, 40; in timber, 20, scrub. Acres tillable, 140. Fruit, a few apple trees, pears and grapes. Adapted to corn, rye, potatoes, oats and hay. Fences, poor condition. House, fair condition. Large barn, fair condition. House watered by well, barns by well and fields by creeks. Occupied by tenant. Reason for selling, to settle estate. Price, \$5,000. Terms, easy. Will rent. Address D. M. Hill, owner, Elbridge, N. Y.

TOWN OF ONONDAGA

Population 6,267

No. 316.—Farm of 30 acres; located $4\frac{1}{2}$ miles from Syracuse P. O., R. D. 3; 6 miles from railway station at Syracuse, on line of several railways; $\frac{1}{4}$ mile from school; 2 miles from churches and butter factory; $\frac{3}{4}$ mile from milk station. Highways, good. Surface of farm, rolling. Altitude, about 1,100 feet. Soil, limestone formation. Acres in meadow, 18; in timber, 4, beech and maple, second growth. Acres tillable, 26. Fruit, about 50 apple, 10 plum, 10 cherry, 10 pear, 5 peach and 2 quince trees, also berries, grapes and currants. Best adapted to alfalfa, potatoes, grain and fruit. Fences, mostly new wire, good. House, 8 rooms, good condition. Outbuildings: new barn, 32x44; with new cow stable for seven cows, 14x32; new hog house, 10x15; new poultry house, 16x20. All buildings except house have been built within last

four years. Watered, house by well and cistern, barns by well. This farm is about 7 miles from Onondaga Lake. Occupied by owner. Reason for selling, ill health. Price, \$4,000. Terms, \$3,000 cash, balance on mortgage. Address Alice L. Amidon, owner, Station A, Syracuse, N. Y., R. D. No. 3.

No. 317.—Farm of 87 acres; located 4 miles from Marcellus P. O., R. D. No. 1; 1 mile from railway station at Howlett Hill, on line of Auburn & Syracuse Electric R. R.; 1 mile from school; 2 miles from churches and 1 mile from milk station. Highways, state road, except $\frac{1}{2}$ mile. Nearest city, Syracuse, population 145,293, 6 miles distant, reached by rail and highway. General surface of farm, rolling. Nature and quality of soil, black clay. Acres that can be used as meadow, 75; in natural pasture, 12; in timber, 4, maple, beech, hemlock and ash. Acres tillable, 75. Fruit, about 50 apple trees and some other small fruit. Adapted to alfalfa, grain, hay, cabbage, potatoes, garden truck, etc. Fences, mostly wire, in fair condition. House with 10 rooms and good cellar, in good condition. Outbuildings: poultry house, corn house with basement for pigs, grain barn with horse and cow stable combined and shop. House watered by well, barns by well and fields by running stream. Mud Lake, $\frac{1}{2}$ mile distant. Occupied by tenant. Reason for selling, to settle an estate. Price, \$7,500. Terms on application. Address T. H. McManus, executor, 23 South Pearl street, Albany, N. Y.

TOWN OF POMPEY

Population 2,344

No. 318.—Farm of 144 acres; 5 miles from Manlius P. O., R. D. 3, and railway station on line of Chenango Valley branch of the N. Y. C. R. R.; 40 rods from school; $1\frac{1}{2}$ miles from church; $1\frac{1}{4}$ miles from butter factory and cheese factory; $1\frac{1}{2}$ miles from milk station; 4 miles from condensing plant. Highways, good. Nearest village, Manlius, population 1,304, 5 miles distant, reached by highway; Syracuse, 14 miles distant, reached by trolley from Manlius. Surface, slightly rolling, no hills; lies sloping to southeast. Soil, dark clay and gravel loam. Acres in meadow, 40; in timber, 7 or 8; acres tillable, all except wood lot. 133 apple and a few plum trees. Adapted to wheat, corn, barley, oats, potatoes, cabbage and

**FIG. 42.— HOUSE ON FARM NO. 305, TOWN OF MARSHALL, ONEIDA
COUNTY**

FIG. 43.— VIEW ON FARM NO. 309, TOWN OF VERONA, ONEIDA COUNTY.



alfalfa. Fences, rail and wire, fair condition. House, 30x38, 10 rooms; wing, 12x16; wood house. Barns: horse barn and carriage house, 30x40, painted, in good condition; hog and corn house, 12x14; hay, grain and cow barn, 42x68; 2 hay barns, 20x30 and 18x30. Watered, house by wells, barns by wells and springs, fields by springs. Occupied by tenant. Reason for selling, owner is not a farmer and is in poor health. Price, \$75 per acre. Terms, part cash, part mortgage. Address C. A. Lakin, owner, Manlius, N. Y., R. D. No. 3.

No. 319.—Farm of 211 acres; located 6 miles from Manlius, on line of W. S. R. R.; 50 rods from school; 2 miles from churches, butter factories, cheese factories and milk station and 5 miles from condensing plant. Nature of highways, somewhat hilly, but good. Nearest city, Syracuse, population, 145,293, 16 miles distant, reached by highway and trolley from Manlius. General surface, rolling. Altitude, 1,400 feet. Nature of soil, sandstone, loam and muck. Acres used as meadow, 100; in natural pasture, 65; in timber, 35, hemlock, maple and elm. Acres tillable, 175. Fruit, 100 apple, 7 plum, 5 pear and 2 cherry trees; some raspberries. Adapted to corn, potatoes, alfalfa, oats, wheat, barley and cabbage. Wire fences, in good condition. House, 12 rooms, in good condition. New basement barn, 82x36, and one other outbuilding in fair condition. House watered by well and cistern; barns by well, and fields by springs. 7 miles from Cazenovia Lake. Occupied by owner. Reason for selling, wish to retire. Price, \$9,000. Terms on application. Address Thomas F. Mullin, owner, Manlius, N. Y., R. F. D. No. 3.

No. 320.—Farm of 141 acres; located 5 miles from Manlius P. O., R. D. 3; 3 miles from railway station at Oran, on line of W. S. R. R.; 1 mile from school and church, butter and cheese factory and milk station. Highways, good. Nearest city, Syracuse, population 145,293, 15 miles distant, reached by highway and trolley. Surface, rolling. Soil, dark loam. Ten acres of timber, maple, beech and hemlock; a few pine trees, acres tillable, 131; 75 to 100 apple trees. Adapted to hay, alfalfa, wheat, barley, oats, corn and buckwheat. Fences, wire and rail, good condition. Large 12-room house, 2 cellars, good condition. Outbuildings: hay barn, with basement stable, 56x32; large silo; 2

large sheds attached to barn; grain barn, 30x40; granary, 16x20; carriage house, 25x35. House watered by well; barns, by well; fields, by spring and creek. Occupied by tenant. Reason for selling, other business. Milk collected at door. Price, \$6,000. Terms, \$2,000 cash, balance on easy terms. Address F. F. Hubbard, owner, Canastota, N. Y.

TOWN OF SPAFFORD

Population 1,082

No. 321.—Farm of 138 acres; located 5½ miles from Skaneateles P. O., R. D. No. 3; 3½ miles from railway station at Rose Hill, on line of M. & L. O. R. R.; ½ mile from school; 2 miles from churches and butter factory and 5 miles from milk station. Highways, state road, except 1 mile. Nearest city, Syracuse, population 145,293, 21 miles distant, reached by rail and highway. General surface, rolling; pasture, hilly. Altitude, 1,000 feet. Nature of soil, deep loam. Acres that can be used as meadow, 95; in natural pasture, 20; in timber, 6, beech, basswood, pine and hemlock. Acres tillable, 90. Fruit, 200 apple trees. Adapted to wheat, alfalfa, potatoes, cabbage, etc. Fences, wire, fair. House, 13 large rooms, good condition. Outbuildings: basement barn, 30x50, and one 28x72. House, watered by well and cistern, barns by well, fields by brook. Lake Skaneateles, ½ mile from farm. Occupied by tenant. Reason for selling, other business. Price, \$8,000. Terms, \$1,500 cash, balance at 5% and \$200 on principal annually. Address Rev. Charles H. Hess, owner, 188 Partridge St., Albany, N. Y.

TOWN OF TULLY

Population 1,574

No. 322.—Farm of 104 acres; located ½ mile from Tully P. O., R. D. No. 1, and railway station, on line of D., L. & W. R. R.; ½ mile from churches; ½ mile from school and milk station. Highways, state road. General surface of farm, level and rolling. Soil, muck. Acres that can be used as meadow, 75; in natural pasture, 29. Acres tillable, 75. Best adapted to hay, cabbage and corn. Fences, wire, good condition. Ten-room house, in fair condition. Poor barns. House watered by spring and fields by springs. Occupied by owner. Reason for selling, other business. Price, \$4,000. Terms, \$2,000 cash, balance on mortgage. Address J. C. Reagan, owner, Tully, N. Y.

ONTARIO COUNTY

Area, 674 square miles. Population, 54,628. Annual precipitation, 37.99 inches. Annual mean temperature, 49.2°. Number of farms, 4,416. County seat, Canandaigua.

This county is situated in the middle western portion of the state and is one of New York State's strong agricultural counties. It is partly bounded on the east by Seneca Lake and is drained by Flint, Honeoye and Mud Creeks and Canandaigua outlet. The surface is finely diversified with hills, valleys and ridges. The contour is quite irregular in the southwestern part, there being many steep hills and deep valleys. These gradually slope down to ordinary hilly in about the center of the county and to gentle undulations and level country in the northeastern part. The county has considerable woodland on which ash, beech, elm, oak and sugar maple are found. The principal rocks which underlie the county are Onondaga limestone and Devonian sandstone. It also has quarries of gypsum, water limestone and salt. The soil is very productive, ranging from a rich gravelly loam, interspersed with clay in the northern and central portions, to a rich clay loam in the valleys of the southern part of the county. All forms of agriculture, orcharding and vineyards included, are successfully carried on in the county. The leading crops reported are corn, 593,169 bushels; oats, 1,365,487 bushels; wheat, 532,138 bushels; barley 159,584 bushels; rye, 51,700 bushels; dry beans, 113,303 bushels; potatoes, 1,642,755 bushels; hay and forage, 93,364 tons; hops, 282,253 pounds. The total value of all farm property is \$32,593,635, an increase of 37.4 per cent. since the census of 1900. The average value of farm land alone per acre is \$39.53, a gain of \$8.24 during the last decade. The average value of improved land is \$71.42 per acre. Domestic animals reported: Dairy cows, 13,272; horses, 15,620; swine, 17,035; sheep, 67,502; poultry, 243,068; production of milk, 6,410,876 gallons, which valued with its products amounted to \$465,930.

The county is intersected by several trunk lines of railroads, which furnish ample facilities for marketing all products. There are 193 district schools, and Hobart College and William Smith College for Women are located at Geneva. Here also is located the New York State Experiment Station, an institution devoted to scientific agriculture equal to any in the world. Large nurseries are located in this county. The county has 55 miles of state and county roads and 845 miles of improved highways.

TOWN OF GENEVA

Population 1,386

No. 323.—Farm of 50 acres; located 4 miles from city of Geneva; $\frac{1}{4}$ mile from railway station at Billsboro, on line of N. Y. C. R. R. (Pa. Div.); 1 mile from school; 4 miles from churches and milk station. Highways, gravel, good condition. Surface of farm, slightly rolling. Soil, some clay and some sand. All tillable, except 2 acres of timber. Fruit, apples, peaches, pears, plums, cherries and quinces. Adapted to corn, oats, potatoes, cabbage, wheat, etc. House, 14 rooms, good condition, brick. Also good tenant house. Outbuildings, 2 barns. Watered, house, by spring; barns, by well; fields, by spring. Farm has lake front, number of cottage sites, beautiful location. Occupied by owner. Reason for selling, ill health of owner. Price, \$10,000. Terms to suit purchaser. Address Mrs. Elizabeth Rupert, owner, Geneva, N. Y., R. D. 1.

TOWN OF PHELPS

Population 4,891

No. 324.—Farm of 54 acres; located $\frac{1}{2}$ mile from railway station at Oaks Corners, on line of N. Y. C. R. R.; $\frac{3}{4}$ mile from church; $4\frac{1}{2}$ miles from butter factory and milk station. Highways, good. Nearest city, Geneva, population 13,232, $4\frac{1}{2}$ miles distant, reached by rail and highway. Surface of farm, level. Soil, sandy loam. Acres in natural pasture, 15; in timber, 1, ash and soft maple; acres tillable, 40. Fruit, apples, cherries, peaches and pears. Best adapted to general farming. Fences, wire, poor. House, 12 rooms, good condition. Outbuildings, basement barn, 72x26; poultry house, 17x17, good condition. Watered by well. This farm is $4\frac{1}{2}$ miles from Seneca Lake. Reason for selling, owner in other business. Price, \$5,000. Terms, half cash, balance on mortgage at 6 per cent interest. Address Lincoln G. Backus, owner, Monrovia, Calif. Owner will rent.




FIG. 44.—VIEW ON FARM No. 314, TOWN OF CLAY, ONONDAGA COUNTY.

FIG. 45.—HOUSE ON FARM No. 318, TOWN OF POMPEY, ONONDAGA COUNTY.



TOWN OF RICHMOND

Population 1,208

No. 325.—Farm of 100 acres; located 6 miles from Honeoye P. O., R. D. 1; 8 miles from railway station at Naples on line of Lehigh Valley R. R.; 1 mile from school; 3 miles from churches. Highways, fair. Altitude, 1,200 feet. General surface of farm, sloping. Nature of soil, silt and shale loam. Acres in timber, 90, 30 acres virgin forest, balance 60 years old. Best adapted to pasture; potatoes, when improved. Fences, wire. No house or barns. Honeoye Lake, 1½ miles distant. Reason for selling, owner has too much land. Price, \$900. Terms, easy. Address B. G. Abbey, owner, East Bloomfield, N. Y., route 3.

TOWN OF SOUTH BRISTOL

Population 964

No. 326.—Farm of 220 acres; located 5 miles from Honeoye P. O.; 10 miles from railway station at Hemlock or Naples, on line of Lehigh Valley R. R.; ¼

mile from school; 5 miles from churches, butter factory, condensing plant, and milk station. Highways, part hilly, part state road. Nearest city, Canandaigua, population 7,501, 20 miles distant. Surface of farm, mostly gentle slope, part rolling. Altitude, about 1,800 feet. Soil, mostly loam, a few acres of muck. Acres in meadow, 50; in natural pasture, 90; in timber, 50, oak, pine, chestnut, maple, ash, hickory, elm, etc.; acres tillable, 150. Fruit, old apple orchard, some young peach and pear trees. Adapted to dairying and stock raising, also to hay, oats, potatoes, beans, raspberries and apples. Fences, mostly woven wire, some rail, good condition. House, 8 rooms, good condition. Outbuildings, barn, 34x50; barn, 34x48; barn, 34x36; wagon shed, work shop, poultry house and evaporator. Watered by well and springs. This farm is 2 miles from Honeoye Lake. Occupied by owner. Reason for selling, old age. Price, \$5,500. Terms, \$2,500 cash, balance on bond and mortgage. Address S. S. Williams, owner, Honeoye, N. Y.

ORANGE COUNTY

Area, 781 square miles. Population, 118,118. Annual precipitation, 52.5 inches. Annual mean temperature, 49.3°. Number of farms, 3,935. County seat, Goshen.

This county is situated in the southeastern part of the state bordering on New Jersey; the eastern line is bounded by the Hudson River and the southwestern by the Delaware River. It is intersected by the Wallkill River and also drained by the Shawangunk and Ramapo Rivers.

The surface is mostly long sloping hills diversified with broad fertile valleys, except in the southeastern part and along the western border. These hills do not attain any great height and are arable to their summit. The eastern region of the county comprises a large part of the highlands of the Hudson. The hills are divided by a valley which opens on the Hudson just below Newburg, the soil of which is of a limestone formation. Directly west of these highlands extending north and south is the broad Wallkill Valley with its rich soil of black dirt and gravelly loam. To the west of this valley lies another chain of hills, the soil of which is mostly a gravelly loam. Granite, limestone and iron ore are found in this locality. The county ships to New York City, millions of gallons of milk and the cities of northern New Jersey can be reached from any part of it in two hours. The total value of all farm property is \$35,516,309, an increase of 44.6 per cent. over that shown in the census of 1900. The average price of improved farm land is \$75.28, an increase of 23.52 per cent. over that of ten years ago. The principal crops reported are corn, 451,179 bushels; oats, 114,215 bushels; rye, 48,960 bushels; potatoes, 288,341 bushels; hay and forage, 133,241 tons. Domestic animals reported: Horses, 10,723; swine, 8,838; sheep, 3,904; poultry, 249,061; dairy cows, 45,882; 202,000 head of cattle other than dairy cattle are also reported. There were produced 30,878,586 gallons of milk, which with the product of 68 milk stations and factories sold for \$3,537,640. The county is traversed with main lines and branches of several important railroads, including the New York, Ontario & Western; Pennsylvania; West Shore and Erie. West Point, the United States Military Academy, is located on the shore of the Hudson River in this county. There are 169 district schools, many excellent high schools, several classical schools. Wallkill Academy and Union schools at Middletown and the Newburgh Institute for Boys at Newburgh. The county has 28 agricultural societies, 60 miles of state and county roads and 1,343 miles of improved highways.

TOWN OF BLOOMING GROVE

Population 2,116

No. 327.—Farm of 140 acres; $1\frac{1}{2}$ miles from Craigville P. O. and railway station, on line of Erie R. R.; $\frac{1}{2}$ mile from Farmingdale; 5 miles from Goshen, population 3,511. Creamery and school houses near farm. Highways, good. Soil, loam. Acres tillable, 125; timber, 15. Fruit, mostly apples. Occupied by tenant. House, 13 rooms, in good condition; also tenant house. Barn, improved cow stable, wagon house and ice house. Watered, house, by well and cistern; fields, by Cromeline creek and springs. Farm is suitable for dairy, horses, poultry, grain or for a summer home. Has an especially fine water supply. Price, \$8,500. Terms, two-thirds cash. Address William V. Seaman, owner, Washingtonville, N. Y.

TOWN OF CHESTER

Population 2,135

No. 328.—Farm of 265 acres; located 2 miles from Chester P. O. and railway station on line of Erie R. R.; 1 mile from school, cheese factory and milk station; $1\frac{1}{2}$ miles from Protestant churches. Highways, good. Nearest large village, Goshen, population 3,511, 5 miles distant, reached by highway. Surface of farm, part level, part hilly. Altitude, about 500 feet. Soil, clay, good. Acres that can be used as meadow, 165; in natural pasture, 100; in timber, 5; all kinds of hard wood; acres tillable, 250. Fruits of all kinds. Adapted to hay and all kinds of grain. Fences, stone, rail and wire. House, 13 rooms, bath, hot water heat, electric lights, 1 large hall, good condition. Outbuildings, plenty of barns, mostly new; room for 100 cows, good condition. Watered by well, cistern and windmill, also good springs and streams. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$40,000. Terms, one-half cash. Address James Seeley, owner, Chester, N. Y.

TOWN OF CORNWALL

Population 5,110

No. 329.—Farm of 50 acres; located $\frac{1}{2}$ mile from Cornwall-on-Hudson P. O.; 1 mile from railway station at Cornwall Landing, on line of W. S. R. R.; $\frac{1}{2}$ mile from school and churches, and $1\frac{1}{2}$ miles from milk station. Highways, good. Nearest city, Newburgh, population 27,876, 5 miles distant, reached by rail or

highway. General surface, rolling. Nature of soil, good. Acres that can be used as meadow, 45; in timber, 3, mostly oak. Fruit, mostly apples and cherries. Adapted to all kinds of crops. Fences, stone wall and wire, in fair condition. House, 12 rooms and bath, hot and cold water, hot water heat, stationary tubs and hardwood floors. Outbuildings, horse barn, 28x32; cow barn, 45x36; wagon barn and shop, all in good condition. House, watered by village water; barns, by well; fields, by brook and springs. Hudson River, 1 mile distant, Storm King mountain in view of farm. Occupied by owner. Nice place for country home. Reason for selling, to settle an estate. Price on application. Address Edward A. Clark, Cornwall-on-Hudson, N. Y.

TOWN OF MONTGOMERY

Population 8,017

No. 330.—Farm of 4 acres; located $\frac{3}{4}$ mile from Montgomery P. O., R. D. 3 and railway station on line of Erie R. R.; school and churches across road. Highway, state road. General surface, level. Altitude, 500 feet. Nature of soil, loam; acres tillable, 3. Best adapted to gardening. Fences, wire, all new. House, new, bungalow type, 7 rooms, hardwood floors, fire place. House watered by inside cistern and well. Large 2-story barn, newly painted. Reason for selling, owner has no use for same. Price, \$2,800. Terms, \$1,000 cash, balance 5 years, 5 per cent mortgage. Address J. M. Wilkin, owner, Montgomery, N. Y.

TOWN OF MOUNT HOPE

Population 1,589

No. 331.—Farm of 140 acres; 2 miles from Guymard P. O. and railway station, on line of E. R. R.; $\frac{3}{4}$ mile from school; 4 miles from churches; 2 miles from milk station; 4 miles from milk condensing plant. Highways, good. Nearest village, Otisville, population 500, reached by highway, 4 miles distant. Surface, level. Soil, gravel. Acres in meadow, 50; natural pasture, 40; timber, 6, oak and chestnut; acres tillable, 50. Fruit, about 50 apple and 150 peach trees. Adapted to wheat, corn, rye, oats and buckwheat. Fences, stone wall and wire, in good condition. Large house and small tenant house, good condition. Outbuildings: barn, 28x80, with addition, 16x30; inclosed shed, 15x60, in fair condition; wagon and corn

house. Watered by well, springs and running water. Occupied by owner. This farm will keep from 25 to 30 cows; well watered; adapted to fruit raising. Price, \$5,000. Terms, $\frac{1}{2}$ cash. Address W. W. Clark, owner, Otisville, N. Y.

No. 333.— Farm of 128 acres; located 7 miles from Middletown P. O., R. D.; 3 miles from railway station at Otisville, on line of Erie R. R.; $\frac{1}{2}$ mile from school and churches; 4 miles from milk station and condensing plant. Highways, good. Nearest city, Middletown, population 16,381, reached by rail and highway. Surface of farm, comparatively level. Altitude, 900 feet. Soil, heavy loam. Acres in meadow, 15; in natural pasture, 30; in timber, 15, chestnut and oak; acres tillable, 80. Fruit, 30 apple, 12 peach and 10 pear trees. Adapted to all farm crops. Fences, stone and wire. House, 28x45, fine basement, in good condition. Outbuildings: barn, 28x65; poultry house, granary and ice house. Watered, house and barns, by well. The Shawangunk River runs through this farm. Occupied by tenant. Reason for selling, ill health. Price, \$9,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address A. L. Saxton, owner, Patchogue, N. Y.

No. 334.— Farm of 208 acres; located $2\frac{1}{2}$ miles from Guymard; $2\frac{1}{2}$ miles from Graham, on line of Erie R. R.; 1 mile from school; $4\frac{1}{2}$ miles from churches and condensing plant and $2\frac{1}{2}$ miles from milk station. Highways, good. Nearest city, Middletown, population 16,381, 10 miles distant, reached by rail and highway. General surface, quite level. Nature of soil, gravelly. Acres that can be used as meadow, 50; now used as meadow, 30; in natural pasture, 40, and in timber, 65, oak and chestnut. Acres tillable, 70. Fruit, 100 peach and a few apple trees. Adapted to raising grain. Fences, stone and wire, in good condition. House, 10 rooms. Outbuildings, barn, 30x84; ice and milk house, 16x24. Watered, house, barns and fields by running water from springs. Occupied by owner. Reason for selling, other business. Price, \$6,000. Terms: $\frac{1}{2}$ cash and remainder on mortgage. Address W. W. Clark, owner, Otisville, N. Y.

TOWN OF WALLKILL

Population 2,803

No. 335.— Farm of 65 acres; located $2\frac{1}{2}$ miles from Middletown P. O., R. D.

No. 2; $\frac{1}{2}$ mile from railway station at Mechanicstown, on line of N. Y., O. & W. R. R.; 1 mile from school; $2\frac{1}{2}$ miles from churches; 1 mile from cheese factory; $1\frac{1}{2}$ miles from milk station and $2\frac{1}{2}$ miles from condensing plant. Highways, good. General surface, slightly rolling. Altitude, 575 feet. Nature of soil, loam. Acres that can be used as meadow, 52; in natural pasture, $12\frac{1}{2}$; in timber, $\frac{3}{4}$, oak, ash, etc. Acres tillable, almost all. Fruit, peaches, apples, pears, plums and cherries. Adapted to wheat, corn and oats. Fences, stone wall and wire, good condition. House, large 10 room, good condition. Outbuildings, barn, 30x60; wagon house, hay house, ice house; all in good condition. Watered, house, by well and cistern; barns, by well, and fields by springs. Wallkill river, 1 mile distant. Occupied by owner. Reason for selling, wish to retire. Price, \$12,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address G. W. McEwen, owner, Middletown, N. Y.

TOWN OF WARWICK

Population 8,113

No. 336.— Farm of 160 acres; located 1 mile from New Milford P. O. and railway station on line of Lehigh & Hudson R. R. Rs.; 60 miles to New York City; 1 mile from school; $1\frac{1}{2}$ miles from church; 1 mile from milk station. Highways, good. Nearest village, Warwick, population 2,505, 4 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 550 feet. Soil, slate and loam. Acres in meadow, 50; in natural pasture, 10; in timber, 10, rock and white oak. Acres tillable, 150. Fruit, 90 acres of peach and apple trees. Best adapted to fruit and dairying. Fences, wire, in good condition. House, 13 rooms, slate roof, in fine condition. Outbuildings, 2 barns, 28x34 and 22x40; granary, 28x40; tenant house, 5 rooms and all necessary outbuildings. Watered, house, by well; barns, by springs; fields, by springs and streams. This farm is 3 miles from Po-chuck Mountains. Occupied by owner. Price, \$40,000. Terms, to suit purchaser. Address Harry Vail, owner, New Milford, N. Y.

No. 337.— Farm of 32 acres; located 1 mile from New Milford P. O. and railway station on line of Lehigh and Hudson R. R. Rs.; 2 miles from school; $1\frac{1}{2}$ miles from churches. Highways, good. Surface of farm, rolling. Altitude, 520

feet. This land is all planted to fruit, about 3,000 peach and apple trees. Best adapted to fruit. Fences, wire, in good condition. No buildings. Watered by springs. Price, \$5,500. Terms, \$2,000 down, balance, \$300 per year, interest at 5%. This is a good piece of land for some city man to build a bungalow on. Address Harry Vail, owner, New Milford, N. Y.

No. 338.—Farm of 35 acres; located 1 mile from New Milford P. O. and railway station, on line of Lehigh and Hudson R. R. Rs.; 1 mile from school; 1½ miles from churches; 1 mile from milk station. Highways, good. Nearest village, Warwick, population 2,505, 4 miles distant, reached by rail and highway. Surface of farm, nearly level. Altitude, 550 feet. Soil, sandy loam. Acres in meadow, 23; in natural pasture, 4; in alfalfa, 8. Acres tillable, 31. Fruit, apples, cherries, pears, etc., for family use. Best adapted to alfalfa and fruit. Fences, stone and wire in good condition. House, 28x34, slate roof, in first class condition. No barn. Occupied by tenant. Price, \$5,000. Terms, ½ cash, or less, balance on mortgage at

5%. Address Harry Vail, owner, New Milford, N. Y.

No. 339.—Farm of 45 acres; located 3 miles from Warwick P. O., R. D. and railway station, on line of Lehigh & Hudson River R. R.; 1 mile from school; 3 miles from churches. Nearest village, Warwick, population, 2,505. Nature of soil, muck. This property is undeveloped. Adapted to lettuce, celery, onions, potatoes, corn, etc. Price, \$4,000. Terms, \$500 cash, balance on contract. Address Harry Vail, owner, New Milford, N. Y.

No. 340.—Farm of 15 acres; located ½ mile from Pine Island P. O. and railway station on line of Erie R. R.; ½ mile from school; ¼ mile from churches. Nearest village, Warwick, population 2,505, 5 miles distant, reached by good highway. General surface, level. Altitude, 500 feet. Nature of soil, muck. This property is undeveloped. Best adapted to onions, celery, potatoes, lettuce, etc. Price, \$300 per acre. Terms, \$500 down, balance on contract. Address Harry Vail, owner, New Milford, N. Y.

OSWEGO COUNTY

Area, 962 square miles. Population, 75,929. Annual precipitation, 41.36 inches. Annual mean temperature, 47.3°. Number of farms, 6,319. County seat, Oswego.

This county is located at the eastern end of Lake Ontario, Oneida Lake and Oneida River forming the southern boundary. It is intersected by the Oswego and Salmon Rivers.

The surface along Lake Ontario is comparatively level with a soil consisting of a gravelly loam. Farther back in the region drained by the Oswego river, the soil is mostly clay loam. The surface is undulating in the eastern part of the county and the soil is a gravelly loam with many scattered beds of muck. In the southern part, the surface is rolling, declining to a flat level tract in the region of Oneida Lake, the soil being sandy but fertile. Silurian sandstone, an excellent material for building purposes, constitutes the rock found next to the surface of the soil.

All fruits flourish and the county is noted for its excellent quality of small fruits and apples. During the season of strawberries and raspberries, iced berry cars are run daily to New York City, Boston and Philadelphia. Some of the principal crops are corn, 491,706 bushels; oats, 504,314 bushels; buckwheat, 71,394 bushels; potatoes, 997,874 bushels; hay and forage, 166,002 tons. The value of all farm property is \$23,804,151, an increase of 21.5 per cent. during the past ten years. The average price of land only in this county is \$18.27, and the average price of improved land is \$35.97. There are many cheap farms with orchards that have been planted for fifty and sixty years but have never had any proper treatment. With the application of modern methods of care and marketing these would yield abundantly. A notable instance of this has recently occurred. One farm of 100 acres, containing an orchard of ten acres, trees planted 54 years, was bought for \$7.50 per acre, and the orchard produced under the first year's cultivation, fertilization, pruning and spraying, about \$4,000 worth of apples. The entire farm has been cleared of brush, briars and other growth, and has been set out to orchard.

A "CORNER" IN OATS.

NEW YORK LEADS IN THE PRODUCTION OF BUCKWHEAT—WORTH AT
PRESENT \$1.50 PER BUSHEL.

Domestic animals are reported as follows: Dairy cows, 40,744; horses, 13,529; swine, 13,848; sheep, 6,009; poultry, 251,022; milk production, 20,101,582 gallons. Amount received from the products of 85 milk stations and factories, \$1,888,709.

The county is traversed in various directions by the R., W. & O., N. Y., O. & W., D., L. & W. railroads and by the Oswego Canal, together with trolley lines running the entire length of the county from Syracuse to Oswego. A state normal and training school is located in Oswego and the largest cornstarch factory in the country has its plant in that city, the output being about 33 tons per day. Wheat and buckwheat flour mills are also located there. There are 273 district schools, well located throughout the county, 58 miles of state and county roads and 1,196 miles of graded and improved highways. There are 66 agricultural organizations in the county, which indicate that the farmers are alert as to the best methods of agriculture.

TOWN OF BOYLSTON

Population 578

No. 341.— Farm of 82 acres; located 5 miles from Lacona P. O., R. D. No. 1, and railway station, on line of R., W. & O. R. R.; 20 rods from school; 3 miles from church; $2\frac{1}{2}$ miles from butter factory and cheese factory; 5 miles from milk station and condensing plant. Highways, state road. Nearest village, Pulaski, population 1,860, 11 miles distant, reached by highway. Surface of farm, fairly level. Altitude, 1,000 feet. Soil, gravelly. Acres that can be used as meadow, 25; in natural pasture, 30; in timber, 1, second growth of beech. Acres tillable, 45. Adapted to oats, corn, buckwheat and potatoes. Fences, stone and wire, good condition. House, 19x25, wing 18x26; woodshed 16x18. Outbuildings, basement barn 40x50, pig pen 14x16, poultry house 12x30, all buildings in good condition. House watered by well, barns by well and fields by stream. Occupied by owner. Reason for selling, to settle estate. Price, \$1,800. Terms, part cash, balance on mortgage. Address Ella M. Lyon, owner, Lacona, N. Y., R. D. No. 1.

No. 342.— Farm of $210\frac{1}{2}$ acres; located 5 miles from Lacona P. O., R. D. No. 2, and railway station, on line of R., W. & O. R. R.; $\frac{1}{3}$ mile from school and church; 4 miles from butter factory; 3 miles from cheese factory; 5 miles from milk station and 11 miles from condensing plant. Highways, good. Nearest village, Pulaski, population 1,860, 11 miles distant, reached by highway. Surface of farm, part level and part rolling. Altitude, 1,070 feet. Soil, gravelly and shale rock. Acres used as meadow, 60; in natural pasture, 125; in timber, 25, beech, maple, poplar and black cherry. Acres tillable, 100. Fruit, plums, apples and pears. Adapted to oats, potatoes, corn and buck-

wheat. Fences, stone wall and wire, good condition. House, 24x24, wings, 14x20, and 16x24; good condition. Outbuildings: barn, 40x105; silo, 14x22; granary, 24x30, and hog pen. House watered by well, barns by well and fields by streams. Occupied by owner. Reason for selling, ill health. Price, \$3,500. Terms, one-third cash, balance on mortgage. Address Fred Hall, owner, Lacona, N. Y.

TOWN OF GRANBY

Population 1,928

No. 343.— Farm of 119 acres; located $4\frac{1}{2}$ miles from Fulton P. O., R. D., and railway station on line of N. Y. C., N. Y., O. & W. and R., W. & O. R. Rs.; $\frac{1}{2}$ mile from school, churches and butter factory. Highway, state road. General surface of farm, level. Nature of soil, loam. Acres in meadow, 24; in pasture, 25; in timber, 7, virgin and second growth. Acres tillable, 80. Fruit, for family use. House, 11 rooms, 2 stories, frame, bath, acetylene gas, furnace heat. Outbuildings: barn 40x60, concrete basement, stanchions for 22 cows, 5 single stalls, 2 box stalls, silo 16x40, all buildings painted and in good condition. House and barns piped with water. Fields watered by stream. Occupied by owner. Reason for selling, has other business. Price, \$11,000. Terms, part cash. Price includes 4 horses, 17 head of stock and large line of farming tools, which includes everything necessary to work a farm of this size. Address Milton Terpening, owner, R. D., Fulton, N. Y.

TOWN OF HANNIBAL

Population 2,334

No. 344.— Farm of 148 acres; located 1 mile from Hannibal; $1\frac{1}{2}$ miles from station, on line of N. Y. C. R. R.; $\frac{1}{2}$ mile from school; 1 mile from churches; $1\frac{1}{4}$ miles from butter factory and cheese

factory; $2\frac{1}{2}$ miles from milk station and $7\frac{1}{2}$ miles from condensing plant. Highways, good, nearly all state road. Nearest city, Fulton, population 11,138, 7 miles distant, reached by highway. General surface, level. Altitude, 500 ft. Nature of soil, mostly clay loam. Acres that can be used as meadow, about 90; now used as meadow, 20 or 30; in natural pasture, 50 or 60; in timber, 15 or 20, largely soft maple, second growth. Acres tillable, about 90. Fruit, about 100 apple and 12 pear trees. Adapted to hay, grain and tobacco. Fences, stone and barbed wire, in fair condition. House, 12 rooms in good condition. Outbuildings: barns, large, including horse barn, cow stable, tobacco sheds, poultry house, open shed, store house, hog house, corn house, granary, silo and stripping room for tobacco. Watered, house and barns by well; fields by stream. Occupied by owner. Reason for selling, other business. Price, \$6,600. Terms, \$2,000 cash, balance on mortgage, payment of \$100 annually with interest at 6 per cent. Address Elwin L. Gardner, owner, Hannibal, N. Y. Will rent.

TOWN OF PALERMO

Population 1,281

No. 345.—Farm of 253 acres; located 9 miles from Fulton P. O., on line of N. Y. C. and D., L. & W. R. Rs.; 1 mile from school; $1\frac{1}{2}$ miles from churches; $2\frac{1}{2}$ miles from butter factory and cheese factory and 9 miles from milk station. Highways, state road. Nearest city, Fulton, population 11,138, 9 miles distant, reached by highway. General surface, rolling and level. Nature of soil, gravelly and loam. Acres that can be used as meadow, 55; in natural pasture, 38; in timber, 70, elm, beech, maple and birch. Acres tillable, 90. Fruit, 420 apple, 252 pear, 7 plum, 6 cherry and 2 mulberry trees. Best adapted to corn, oats, potatoes and hay. Fences, wire and rail in good condition. Outbuildings, barn, $78\frac{1}{2} \times 107$, with concrete floor and running water; barn, 50×80 ; carriage house, 20×26 ; 2 story repair shop, 20×24 ; 2 story granary, 18×16 ; silo, 16×30 ; sugar house, 13×16 , and heading store house, 12×16 . Houses, No. 1, a brick house, 21×28 , annex, 17×21 , and woodhouse, 14×16 . No. 2, is a frame building of 2 stories, 20×40 . Watered, houses and barns by windmill and tank; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$13,500. Terms, reasonable. Coop-

erage plant, 100 horse power boiler, 50 horse power engine, saw mill, stave machine, heading machine, turner, two man saw jointer, cooper shop, stave shed and 2 heading sheds. Address H. J. Gulliver and Sons, Fulton, N. Y.

TOWN OF PARISH

Population 1,392

No. 346.—Farm of 97 acres; located 6 miles from Parish P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R.; $\frac{1}{3}$ mile from school; $2\frac{1}{2}$ miles from churches, butter factory and cheese factory and 6 miles from milk station. Nearest village, West Amboy, $2\frac{1}{2}$ miles distant, reached by highway. General surface, rolling. Nature of soil, gravelly. Acres in meadow, 60; in natural pasture, 67; in timber, 30, all kinds. Acres tillable, 60. Fruit, some apples. Best adapted to corn, oats and potatoes. Fences, stone wall and wire. House, in poor condition. No outbuildings. Reason for selling, to settle an estate. Price, \$1,000. Terms, \$300 cash, balance on mortgage. Address Mary E. Harter, owner, Parish, N. Y.

No. 347 — Farm of 150 acres; located 2 miles from West Amboy; $6\frac{1}{2}$ miles from Parish, on line of N. Y. C. R. R.; $\frac{1}{2}$ mile from school; 2 miles from churches, butter factory and cheese factory; $6\frac{1}{2}$ miles from milk station. Highways, hilly. General surface, rolling. Altitude, 600 feet. Nature of soil, gravelly. Acres now used as meadow, 50; in natural pasture, 50. Acres tillable, 80. Fruit, 75 trees, apples, pears and cherries. Adapted to corn, oats and potatoes. Fences, wire in good condition. House, 11 rooms. Outbuildings, basement barn 30×40 , hay barn, 34×44 and poultry house, 12×20 . Watered, house by well; barn and fields by creek. Occupied by owner. Reason for selling, ill health. Price, \$3,500. Terms, \$1,500 cash and remainder on mortgage. Address William Woolworth, owner, Parish, N. Y.

TOWN OF REDFIELD

Population 678

No. 348.—Farm of 65 acres; located $\frac{1}{4}$ mile from R. F. D.; 6 miles from Williamstown, on line of R. W. & O. R. R.; $\frac{1}{4}$ mile from school; 1 mile from churches, butter factory and cheese factory; 6 miles from milk station. Highways, stone road. Nearest village, Red-

FIG. 46.—GENERAL VIEW ON FARM NO. 345, TOWN OF PALERMO, OSWEGO COUNTY.

**FIG. 47.—MAIN HOUSE ON FARM NO. 345, TOWN OF PALERMO,
OSWEGO COUNTY.**



field, 1 mile distant, reached by highway. General surface, rolling and level. Altitude, 1,150 feet. Nature of soil, gravelly loam and muck. Acres that can be used as meadow, 65; now used as meadow, 20. Acres tillable, 65. Fruit, about 20 apple trees. Adapted to potatoes, onions, corn and oats. Fences, wire, in good condition. House, 12 rooms, in good condition. Outbuildings, barn 20x50, in poor condition. Watered, house and barns by well and fields by spring brook. Occupied by owner. Reason for selling, too much land. Price, \$1,500. Terms: \$800 cash and \$100 per year. Address, W. J. Dowling, owner, Williamstown, N. Y.

TOWN OF RICHLAND

Population 3,920

No. 349.—Farm of 93 acres; located 1 mile from Pulaski, on line of N. Y. C. R. R.; 1/20 mile from school; 1 mile from churches, cheese factory, milk station and condensing plant. Highways, state road. General surface, level and rolling. Altitude, 250 feet. Nature of soil, loam. Acres that can be used as meadow, nearly all; in natural pasture, 5. Acres tillable, 85. Fruit, a few plum, pear and apple trees. Adapted to fruit and grain. Fences, wire. House, large. Outbuildings, large barn and sheds. Watered, house and barns by well; fields by creek. Occupied by owner. Reason for selling, wish to retire. Price, \$25,000 for farm and nursery business. Terms: part cash and remainder on mortgage. Address, Lawrence J. Farmer, owner, Pulaski, N. Y.

N. 350.—Farm of 278 acres; located 1 1/2 miles from Pulaski, on line of N. Y. C. R. R.; 1 1/2 miles from schools, churches, cheese factory, milk station and condensing plant. Highways, state road. Nearest city, Oswego, population 25,426, 25 miles distant, reached by rail and highway. General surface, rolling. Altitude, 740 feet. Nature of soil, clay loam. Acres used as meadow, 100; in natural pasture, 95; in timber, 16, maple, beech and hemlock. Acres tillable, 100. Fruit, 24 apple trees of different varieties. Adapted to corn, oats, buckwheat and barley. Fences, wire, in good condition. House, 14 rooms, steam heat, also new 11 room tenant house. Outbuildings, barn, 50x110 with concrete stable, horse barn in good condition and new milk house. House and barns watered by

well and fields by 2 streams. Four miles from Lake Ontario. Occupied by tenant. Reason for selling, other business. Price, \$14,000. Terms: \$4,000 cash and remainder easy payments. Also, 32 Holstein cows, 2 horses, gasoline leader tractor, full set of farm tools, automobile truck, etc. Address, A. E. Olmstead, owner, Ontario Iron Works, Pulaski, N. Y.

TOWN OF SCRIBA

Population 2,260

No. 351.—Farm of 144 acres; located 7 miles from Fulton P. O., R. D. No. 4; 5 miles from railway station at Lycoming, on line of N. Y. C. & H. R. R. R.; 1/2 mile from school; 2 1/2 miles from churches; 2 1/2 miles from butter factory, cheese factory and milk station. Highways, good gravel road. Surface, level and rolling. Soil, gravel and muck. Acres that can be used as meadow, 50; in natural pasture, 25; in timber, 10, ash, elm and some soft wood. Acres tillable, 100. Fruit, 300 bearing apple trees of standard varieties, 225 pear trees just coming into bearing. Best adapted to general farm crops and garden truck. Fences, wire, in fair condition. Two houses, one of 7 rooms and one of 6 rooms, good condition. Outbuildings: basement barn, 30x40; barns, 24x30 and 24x32, in good condition. House watered by well, barns by well and fields by stream. Paddy Lake, 200 feet from one corner of farm. Occupied by owner. Reason for selling, desires smaller farm. Price, \$7,000. Terms, half cash, balance on mortgage. Address P. H. Nelson, owner, Fulton, N. Y., R. D. No. 4.

TOWN OF VOLNEY

Population 2,420

No. 352.—Farm of 125 acres; located 6 miles from Fulton P. O., R. D. No. 2; 4 miles from railway station at Seneca Hill, on line of N. Y. C. & N. Y., O. & W. R. Rs.; 2 rods from school; 1 mile from church, butter factory, cheese factory and milk station. Highways, partly state road, balance gravel. Nearest city, Fulton, population, 11,138, 6 miles distant, reached by highway. General surface, rolling. Soil, heavy clay and gravelly loam. Acres used as meadow, 30; in natural pasture, 35; in timber 5. Fruit, 400 apple trees, an abundance of other fruit. Adapted to hay, corn, all kinds of grains, potatoes and dairying. Fences, good, mostly

wire. Large 14-room house, fine condition. Outbuildings: basement barn, 44x50, other barns, 30x40 and 32x44, silo and smaller buildings. House watered by well, barns by well. Occupied by tenant. Reason for selling, ill health. Price, \$6,000. Terms, $\frac{1}{3}$ or $\frac{1}{2}$ cash, balance on mortgage. Address A. B. Sanford, owner, Fulton, N. Y.

No. 353.—Farm of 199 acres; located 5 miles from Fulton P. O.; 4 miles from railway station at Seneca Hill, on line of R. W. & O. and N. Y., O. & W. R. R.; $\frac{1}{8}$ mile from school; 3 miles from churches, butter factory and cheese factory; 4 miles from milk station and 5 miles from condensing plant. Highways, good. Surface of farm, rolling. Soil, gravel and heavy dark loam. Acres that can be used as meadow, 40; in natural pasture, 40 to 50; in timber, 25, birch, hard and soft wood. Acres tillable, 125. Fruit, 350 apple and 300 pear trees, all varieties; 40 plum trees, peaches, cherries, grapes and berries. Adapted to berries, potatoes, corn, wheat, oats and cabbage. Fences, wire and rail, good condition. Large double 12-room house, good condition. Outbuildings: barn, 30x82, with addition 20x25; horse barn, 24x58; large shed; 80-ton silo, and several smaller buildings. House watered by well, barns by well and fields by streams. Occupied by owner. Reason for selling, desires smaller farm. Price, \$15,000. Terms, half cash, balance on mortgage. Address W. Rath, owner, Fulton, N. Y., R. D.

TOWN OF WEST MONROE

Population 935

No. 354.—Farm of 87 acres; located $2\frac{1}{2}$ miles from West Monroe P. O. and railway station on line of N. Y., O. & W. R. R.; 1 mile from school; $2\frac{1}{2}$ miles from church, butter factory, cheese factory and milk station. Highways,

good. Surface of farm, rolling. Soil, sandy and clay loam. Acres in meadow, 40; in natural pasture, 25; in timber, 12, second growth. Acres tillable, about 75. Fruit, 25 apple, 1 cherry and 2 plum trees, also 1 grape vine. Adapted to hay, oats, corn, potatoes, wheat and buckwheat. Fences, wire, good. House, upright, 18x24, with wing, 15x20. Outbuildings: barn, 30x40; barn, 40x60; wagon house, 13x24; hog house, 13x16. Watered, house and barn, by well; fields, by spring. This farm is $1\frac{1}{2}$ miles from Oneida lake. Occupied by owner. Reason for selling, ill health. Price, \$4,500. Terms, \$1,000 cash, balance on easy terms. Address John E. Lord, owner, West Monroe, N. Y.

TOWN OF WILLIAMSTOWN

Population 861

No. 355. — Farm of 176 acres; located 4 miles from Williamstown P. O., R. D. No. 3; 4 miles from railway station at Williamstown, on line of R. W. & O. R. R.; $\frac{1}{4}$ mile from school; 4 miles from churches; $\frac{1}{2}$ mile from milk station and 4 miles from condensing plant. Highways, hilly, mapped for state road. Nearest village, Camden, population, 2,181, 10 miles distant, reached by rail. General surface, fairly level. Altitude, 1,200 feet. Nature of soil, black loam and muck. Acres that can be used as meadow, 35; now used as meadow, 25; in natural pasture, 50; in timber, 65, birch, maple and pulp wood. Fruit, small apple orchard. Adapted to hay, oats, corn and potatoes. Fences, wire. House, 7 rooms, good condition. Outbuildings, horse barn, 20x24; basement cow barn, 26x36, basement, 14x26. Watered, house, by well and fields by brooks. Occupied by owner. Reason for selling, wish to retire. Price, \$2,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address, O. N. Secor, owner, Williamstown, N. Y.

OTSEGO COUNTY

Area, 956 square miles. Population, 48,534. Annual precipitation, 46.52 inches. Annual mean temperature, 46.3°. Number of farms, 5,346. County seat, Coopers-town.

This county is situated in the southeastern part of the state. It is drained by the Susquehanna River which has its source in Otsego Lake, by Charlotte River and Butternut and Scheneyus Creeks. Like all the counties of the state it has an abundance of clear, pure water.

The surface is diversified with high broad ridges and long deep valleys, which are generally very wide. Woodlands of oak, sugar maple, ash, beech and elm, are well scattered through the county and cover nearly one-fourth of its area, namely, 143,817 acres. Sandstone and limestone underlie a part of the county, furnishing

FIG. 48.— ONE OF THE LARGE BARNs WITH SILO, ON FARM No. 345, TOWN OF PALERMO, OSWEGO COUNTY.

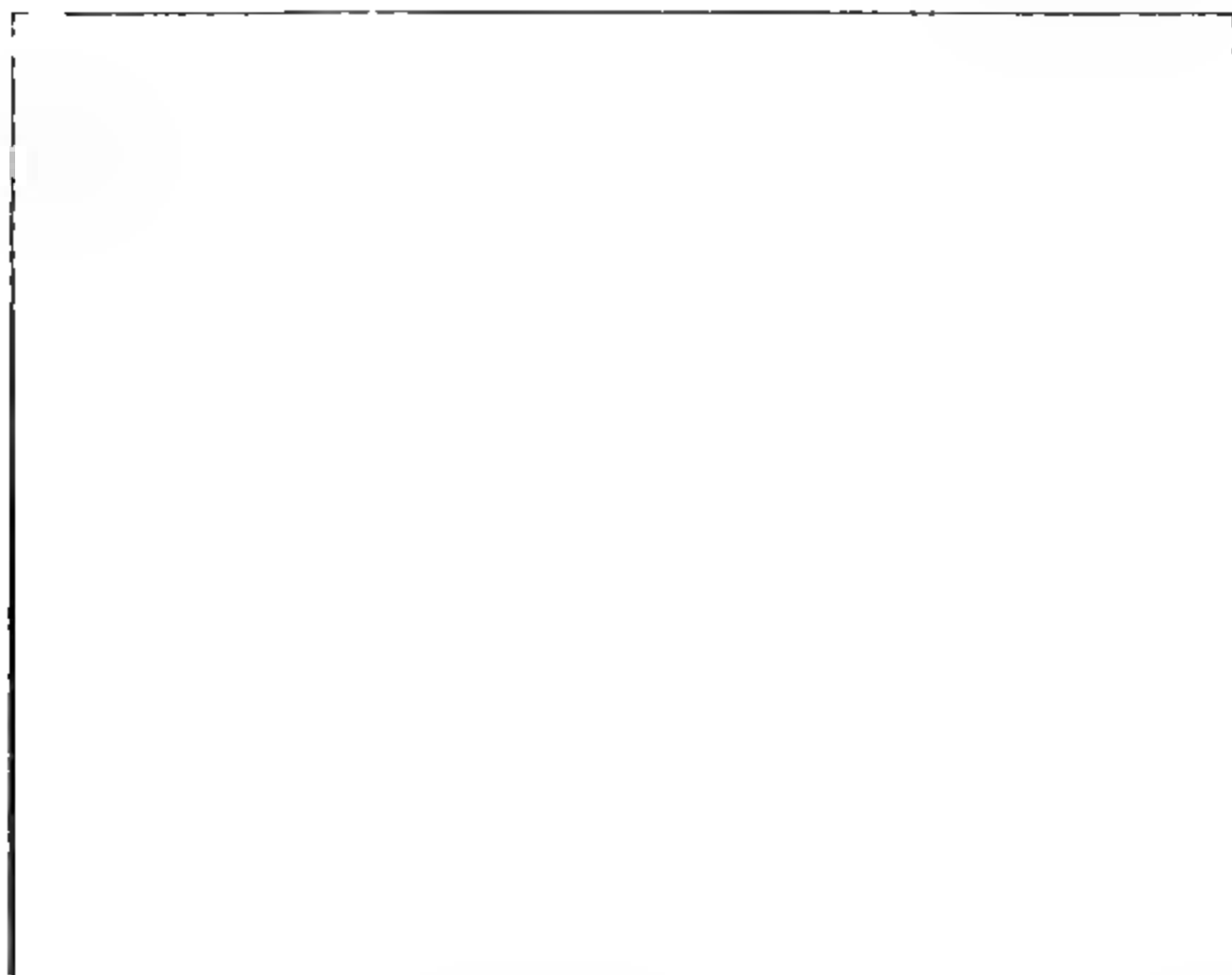


FIG. 49.— SAWMILL AND COOPERAGE PLANT ON FARM No. 345, TOWN OF PALERMO, OSWEGO COUNTY.



excellent building material. The soil in the northern part is a gravelly loam while in the eastern part clay loam predominates. In the southern section a soil is found consisting of a red shale formation. In the other parts of the county the soil of the ridges consists of gravelly loam, while the valleys are covered with a dark clay loam. As a whole the county is especially adapted to pasturage and all kinds of farming. Otsego County produces more hops than any other county in the state, the yield in 1910 being 2,287,383 pounds. Some of the other leading products are: Corn, 308,096 bushels; oats, 827,095 bushels; buckwheat, 188,855 bushels; potatoes, 1,059,120 bushels; hay and forage, 254,991 tons. The valuation of all farm property is \$26,018,419, an increase of 21 per cent. in the last decade. Domestic animals are reported as follows: Dairy cows, 52,920; horses, 13,258; swine, 14,102; sheep, 10,108; poultry, 303,901; production of milk, 28,047,600 gallons; this with the products of 75 milk stations and factories showed receipts of \$2,796,808. The transportation facilities of the county are excellent; Richfield Springs is popular as a health resort, the springs having great medicinal value. A state normal school is located at Oneonta. There are 296 district schools in the county, 25 agricultural organizations, 78 miles of state and county roads and 2,078 miles of improved highways.

TOWN OF BURLINGTON

Population 1,145

No. 356.—Farm of 30 acres; located 2 miles from Burlington Flats P. O., R. D. and 7 miles from railway station at Edmeston on line of Ontario and Western R. R.; $\frac{1}{4}$ mile from school and butter factory; 2 miles from churches; $\frac{1}{4}$ mile from cheese factory; 2 miles from milk station and condensing plant. Population of Burlington Flats, 212, reached by state road. General surface, level. Altitude, 1,300 feet. Nature of soil, river bottom. Acres in meadow, 30; acres tillable, 30. Best adapted to hay, corn, potatoes and alfalfa. Fences, barbed wire. House, 2 stories, 12 rooms, good condition. Barn 26x30, another 18x28, all in good condition. House and barns watered by wells, fields by creek. Summit Lake, $\frac{1}{2}$ mile distant. Occupied by owner and tenant. Reason for selling, old age. Price, \$1,800. Terms, \$500 cash, balance on mortgage. Address Edward Mayne, owner, Burlington Flats, N. Y.

No. 357.—Farm of 86 acres; located $1\frac{1}{2}$ miles from Burlington Flats P. O.; 7 miles from Edmeston, on line of O. & W. R. R.; $1\frac{1}{2}$ miles from school, churches, Borden's factory, cheese factory and milk station; 7 miles from condensing plant. Highways, good dirt road. Nearest city, Utica, population 90,589, 30 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, loam. Acres that can be used as meadow, 75; now used as meadow, 40; in natural pasture, 35; in timber, 11, hard wood of all kinds. Acres tillable, 75. Fruit, various kinds. Adapted to all crops. Fences, mostly

barbed wire. House, 9 rooms, in good condition. Outbuildings, 40 ft. barn with silo, horse and hay barn. Watered, house, by spring; barns, by spring and fields, by spring. Occupied by tenant. Reason for selling, old age. Price, \$2,500. Terms, \$800 cash, balance on mortgage. Address, Edward Mayne, owner, Burlington Flats, N. Y.

TOWN OF BUTTERNUTS

Population 1,539

No. 358.—Farm of 97 acres; located 2 miles from Holmesville, on line of O. & W. R. R.; 1 mile from school; $2\frac{1}{2}$ miles from churches, butter factory, cheese factory and milk station and 8 miles from condensing plant. Highways, good. Nearest city, Norwich, population, 8,342, 8 miles distant, reached by rail and highway. General surface, level. Nature of soil, loam. Acres that can be used as meadow, 60; in natural pasture, 20; in timber, 17, pine, chestnut, oak and maple. Acres tillable, 75. Fruit, plenty of apples, plums and cherries for family use. Adapted to grain, potatoes and vegetables. Fences, rail and wire, in good condition. House, 12 rooms, in good condition. Outbuildings, basement barn, 30x54, wagon house, 26x36, poultry house, hog house and granary. Watered, house by well; barns and fields by spring. Occupied by owner. Reason for selling, old age. Price, \$3,000. Terms, \$1,000 cash and remainder on mortgage. Address, James H. Wells, owner, South New Berlin, N. Y.

No. 359.—Farm of 137 acres; 3 miles from Mt. Upton P. O. and railway station on line of O. & W. R. R.; 1 mile

from school; 3 miles from churches; 3 miles from Borden's condensary. Highways, $\frac{1}{8}$ mile hilly, remainder of valley grade, good. Nearest large village, Sidney, population, 2,641, distant 9 miles, reached by highway and rail. Surface, about 10 acres hilly, balance, smooth and rolling. Soil, red shale, good. Acres in meadow, 50; in pasture, 60; in timber, 27; about 10,000 feet of hardwood and about 25,000 feet of hemlock; acres tillable, about 80. Fruit, about 100 apple and 15 pear trees, orchard in good bearing condition and young. Adapted to hay, oats, millet, corn, potatoes, etc. Fences, mostly barbed wire, good. House 24x28, fair condition. Barns: one 46x80, new; wagon house, 26x30, fair; granary and poultry house, fair. Watered, house by well and cistern; barns by pond; fields by spring and brooks. Occupied by owner. Reason for selling, ill health. Price, \$4,000. Terms, part of price could be arranged to remain on place. Address, J. A. Musson, owner, Mt. Upton, N. Y.

No. 360.—Farm of 105 acres, located $2\frac{1}{2}$ miles from Gilbertsville P. O., R. D.; 3 miles from railway station on line of O. & W. R. R.; $\frac{1}{8}$ mile from school; $2\frac{1}{2}$ miles from church and butter factory; 3 miles from milk station and 4 miles from condensing plant. Highways, hilly but good. Nearest city, Norwich, population 8,342, 12 miles distant, reached by highway. General surface slopes to west. Nature of soil, red shale, good. Acres in meadow, 35; in natural pasture, 50; in timber, 20, second growth, hardwood and chestnut. Acres tillable, 75. Fruit, about 75 apple and a few pear trees. Best adapted to hay, corn and oats. Fences, rail, wire and stone, in fair condition. Sixteen-room house in good condition. Outbuildings: horse barn, 30x40, good condition; cow barn, 30x40, fair condition; granary, hay barn and wood shed. House and barns watered by well, fields by springs and brook. Occupied by tenant. Reason for selling, other business. Price, \$2,500. Terms, \$1,200 cash, balance on mortgage. Address Wm. M. Hakes, owner, Gilbertsville, N. Y.

No. 361.—Farm of 113 acres, located $2\frac{1}{2}$ miles from Gilbertsville P. O., R. D.; 3 miles from railway station at Rockwells Mills on line of O. & W. R. R.; $\frac{1}{4}$ mile from school; $2\frac{1}{2}$ miles from Protestant church; $2\frac{1}{2}$ miles from butter

factory; 3 miles from milk station and 4 miles from condensing plant. Highways, hilly but good. Nearest city, Norwich, population, 8,342, 12 miles distant, reached by highway. General surface, somewhat hilly, sloping to west. Nature of soil, red shale, good. Acres in meadow, 40; in natural pasture, 60; in timber, 13; hardwood, chestnut and pine. Acres tillable, 60. Fruit, 100 apple, 10 pear, few plum and cherry trees and grape vines. Best adapted to hay, corn and oats. Fifteen-room house in good condition. Outbuildings: cow barn, 30x52, with basement, ell 20x40; horse barn 30x40, with basement; hog pen, poultry house 20x30; large wood house, all in good condition. House watered by well and cistern, barns by well and spring, fields by spring and brook. Occupied by tenant. Reason for selling, other business. Price, \$3,000. Terms, \$1,500 cash, balance on mortgage. Address W. M. Hakes, owner, Gilbertsville, N. Y.

TOWN OF CHERRY VALLEY

Population 1,544

No. 362.—Farm of 100 acres; located 2 miles from Cherry Valley, on line of D. & H. R. R.; 1 mile from school; 2 miles from churches, cheese factory and milk station. Highways, fair. Nearest large village, Cooperstown, population, 2,634, 12 miles distant, reached by highway. General surface, rolling. Nature of soil, limestone. Acres that can be used as meadow, 60; in natural pasture, 40. Acres tillable, 70. Fruit, plum trees. Best adapted to hay and grain. Fences, barbed wire, in good condition. House for 2 families. Barn 60x40. Watered, house, barn and fields by springs. Reason for selling, other business. Price, \$1,500. Terms, \$1,000 cash and remainder on mortgage. Address, George O. Walrad, owner, Cherry Valley, N. Y.

No. 363.—Farm of 300 acres; located $2\frac{1}{2}$ miles from Cherry Valley, on line of D. & H. R. R.; $2\frac{1}{2}$ miles from school, churches, butter factory, milk station and condensing plant and 2 miles from cheese factory. Highways, good. Nearest village, Cherry Valley, population, 762, $2\frac{1}{2}$ miles distant, reached by highway. General surface, rolling and level. Nature of soil, limestone. Acres that can be used as meadow, about 60; in natural pasture, about 60; in timber 100, hemlock, beech and maple. Acres tillable, 260. Fruit, 2 apple orchards.

Adapted to grain, hops, peas, beans, hay, potatoes and corn. Fences, stone and some wire. House, large and in good condition. Outbuildings in good condition. Watered, house by well; barns and fields by creek. Occupied by owner. Price, \$7,000. Terms, \$5,000 cash, balance on mortgage. Address, Harry Giles, owner, Cherry Valley, N. Y.

TOWN OF EDMESTON

Population 1,682

No. 364.—Farm of 440 acres; located $1\frac{1}{2}$ miles from Edmeston, on line of N. Y. C. R. R.; $1\frac{1}{2}$ miles from school and churches and 1 mile from milk station and condensing plant. Highways, good. Nearest city, Oneonta, population 10,474, 24 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, clay loam. Acres that can be used as meadow, 150 to 200; in natural pasture, 200; in timber, 125, hemlock, maple and basswood. Acres tillable, 250. Fruit, a few pear and cherry trees and about 5 acres of apples. Adapted to corn, oats, potatoes, beans, peas, hay, alfalfa and buckwheat. Fences, wire and board, in good condition. Houses, large 20 room, one in good condition, also an 8-room tenant house. Outbuildings, barn 64x30, basement barn, 87x32, 2 silos, milk house, 12x25x27 and poultry house. Watered, house, barn and fields by springs. Occupied by owner. Reason for selling, ill health. Price, \$50 per acre. Terms, \$10,000 cash, balance on mortgage. Address, Henry W. Denison, owner, Edmeston, N. Y.

No. 365.—Farm of 42 acres; in village of Edmeston, on line of N. Y., O. & W. R. R.; graded school; Baptist and Methodist churches; condensing plant in village. State road. Nearest cities, Oneonta and Norwich, reached by rail or highway. Surface of farm, part level and part rolling. Altitude, 1,232 feet. Soil, clay loam, very strong soil. Acres in meadow, 25; in natural pasture, 17; all tillable. Fruit, 20 apple trees, winter and fall varieties. Adapted to corn, oats, potatoes, beans, peas and hay. Fences, board and wire, in good condition. Large 2-story house, with 2 wings, hot water heat, hot and cold water throughout, \$1,500 in plumbing, nicely painted, large lawn. Barns: 84x40, slate roof, cost \$2,000 to build, modern; another barn, 30x40, fine repair; large granary, in fine repair. Watered, house, by city

water; barns, by running water; fields, by running water and living spring. Occupied by tenant. Reason for selling, owner has business interests elsewhere. Price, \$8,000. Terms, \$4,000 cash, balance long term of years at 5 per cent. Address A. H. Medbury, owner, Capac, Mich.

No. 366.—Farm of 150 acres; 3 miles from Edmeston P. O. and railway station, on line of O. & W. R. R.; $\frac{1}{2}$ mile from school; 3 miles from churches, butter factory and milk station. Highways, good, on a grade, but not bad hills. Nearest village, Edmeston, population, 749, 3 miles distant, reached by highway. Surface of farm, meadows slope to east. Soil, very productive. Acres in meadow, 40; in natural pasture, 70; in timber, 40, maple, beech and hemlock. Acres tillable, 60. Fruit, fairly good orchard of 40 trees, various kinds. Best adapted to corn, oats and hay. Fences, mostly barbed wire, in good condition. Fourteen-room house, in good condition. New barn, 32x70, with concrete floor, swing stanchions for 30 head; 2 box stalls, 4 horse stalls, roofed with best grade of metal shingles; silo; 4 other buildings. Watered, house by spring; fields, by never-failing springs. Occupied by tenant. Reason for selling, owner has other business. Price, \$4,500. Terms, \$1,500 cash, balance 5 years at 5 per cent; or \$4,000 cash. Address Clarence Talbot, owner, Edmeston, N. Y.

No. 367.—Farm of 240 acres; $\frac{1}{2}$ mile from Edmeston P. O., R. D. 1, and railway station on line of N. Y., O. & W. R. R.; $\frac{1}{4}$ mile from school; 1 mile from churches; $\frac{1}{2}$ mile from Borden's condensed milk plant. Highways, good. Nearest city, Oneonta, population, 10,474, 24 miles distant, reached by rail and highway. Surface of farm, part level and part rolling. Altitude, 1,200 feet. Soil, loam, very strong. Acres in meadow, 100; in natural pasture, 80; in timber, 55, hemlock, maple and beech. Acres tillable, 175. Fruit, apples. Adapted to corn, oats, potatoes, beans, peas, hay, etc. Fences, mostly wire, good condition. House, 2 stories, with wing, large, good condition. Outbuildings: basement barn, 109x32, concrete floors all through, stable room for 44 head of cattle; 2 silos, 140-ton capacity; shed, 100 feet, with hay loft above; 4 outbuildings; all in good repair.

Watered, house and barn, by running water; fields, by living streams. Occupied by tenant. Reason for selling, owner is in business in Michigan. There is \$5,000 worth of hemlock and \$2,000 worth of hardwood timber on farm; 125 tons of hay were cut last year. Price, \$50 per acre. Terms, \$5,000 down, balance on long time at 5% interest. Address, A. H. Medbury, owner, Capac, Mich.

No. 368.—Farm of 200 acres; located $1\frac{1}{2}$ miles from West Edmeston P. O., R. D. No. 2, and railway station, on line of Unadilla Valley R. R.; $4\frac{1}{2}$ miles from railway station at Edmeston, on line of O. & W. R. R.; $\frac{1}{2}$ mile from school; $1\frac{1}{2}$ miles from churches; $1\frac{1}{2}$ miles from milk station and condensing plant. Surface of farm, rolling. Altitude, 1,350 feet. Nature of soil, clay loam. Acres that can be used as meadow, 60; in natural pasture, 90; in timber, 50, hardwood, hemlock and basswood. Acres tillable, 100. Fruit, 50 apple, 10 pear, 3 cherry and 2 plum trees. Best adapted to hay, oats, corn and potatoes. Fences, wire, in good condition. Twenty-one room house, suitable for 2 families, in fine condition. Outbuildings: cow barn, 30x80; horse barn and wagon house, 24x50; wood house, 30x30; poultry and hog house, 18x40; granary, mill house and ice house, all in good condition. House watered by running water, spring in cellar; barns, by running water in yard, and fields by springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$5,500. Terms, \$1,800 cash, balance on mortgage. Address Frank Wright, owner, Edmeston, N. Y., R. D. No. 2.

TOWN OF EXETER

Population 967

No. 369.—Farm of 13 acres, adjoining the village of Exeter Center; 2 miles from Schuyler Lake, on line of O. & M. V. R. R.; store and post-office on the land; close to good school and churches. Very desirable property for summer home. On a good road, in a fine location. Five acres of orchard. Very fertile soil. Fences, wire, good. House, 2 stories, in good condition, 35x40, with wing, 20x30. Barn, good, 35x65, with new addition; other outbuildings, poultry house, etc. Watered by springs, well and brook. Reason for selling, to settle estate. Price, \$4,000. Terms, \$2,000 cash, balance on time. Address Mrs. Katie Horan, owner, Exeter, N. Y.

TOWN OF LAURENS

Population 1,410

No. 370.—Farm of 192 acres; located 2 miles from Mt. Vision P. O., and railway station, on line of O. & H. R. R.; 1 mile from school; 2 miles from churches; 2 miles from butter factory and 1 mile from milk station. Highways, good. Nearest city, Oneonta, population, 10,474, 7 miles distant, reached by rail or highway. General surface, slightly rolling and part level. Altitude, 1,470. Nature of soil, dark and yellow clay. Acres that can be used as meadow, 140; now used as meadow, 125; in natural pasture, 40; in timber, 27, pine, hemlock and maple. Fruit, 125 apple, 2 pear and 4 plum trees and 20 currant bushes. Adapted to barley, oats, potatoes, buckwheat and hay. Fences, woven wire, excellent. Ten room house, good condition. Outbuildings, stock barn, 36x100; sheep barn, 16x100; 2 poultry houses and a 2 story granary. Watered, house, by running water; barns, by spring and fields by spring. Occupied by owner. Reason for selling, desires large farm. Price, \$6,000. Terms, \$4,500 cash, balance on mortgage. Address N. Worm, owner, Oneonta, N. Y.

No. 371.—Farm of 101 acres; 2 miles from Laurens P. O. and railway station on line of Oneonta & Mohawk Electric R. R.; 2 miles from church and milk station; 1 mile from school. Highways, good. Nearest city, Oneonta, population 10,474, 10 miles distant, reached by rail or highway. Surface, rolling. Soil, good mellow loam. Acres in meadow, 50; in natural pasture, 45; in timber, 15, pine, hemlock, beech and maple. 125 apple and 2 pear trees. Best adapted to corn, oats and potatoes. Fences, wire, in good condition. House, 16x40; wing, 24x32; summer kitchen, 16x16, in good condition. Barn, 44x74. Watered, house, by pump; barns, by running water; fields, by springs and creek. About \$1,500 worth of timber on the place. Reason for selling, ill health. Price, \$4,000. Terms, \$2,000 cash, balance on mortgage. Address A. H. Knight, owner, Laurens, N. Y.

No. 372.—Farm of 86 acres; located 4 miles from Laurens P. O., R. D. 1, and railway station, on line of Otsego & Herkimer R. R.; $\frac{1}{2}$ mile from school; 3 miles from churches; 4 miles from milk station; 3 miles from cheese factory. Highways, good. Nearest city,

CROPS OF TIMOTHY HAY FROM 2½ TO 4 TONS PER ACRE HAVE BEEN RAISED ON ILL. FARMS IN NEW YORK.



Oneonta, population 10,474, 12 miles distant, reached by rail and highway. Surface of farm, level. Altitude, about 1,700 feet. Soil, some fair, some good. Acres in meadow, 36; in natural pasture, 38; in timber, 12, beech and maple. Acres tillable, 70. Fruit, apples, pears, plums, cherries and grapes. Best adapted to hay, grain and potatoes. Fences, wire and stone wall, fair condition. House, 30x34, 2 stories. Outbuildings: barn, 36x38, with stone basement; poultry house, 20x40; wood shed, 12x24; granary, 20x35. Watered, house, by running water; barns and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$2,500. Terms, $\frac{1}{2}$ down, balance on time. Address C. A. Brownell, owner, Laurens, N. Y., R. D. 1.

TOWN OF MARYLAND

Population 1,731

No. 373.— Farm of 225 acres; located 1 mile from Schenevus P. O., R. D. 1; $1\frac{1}{4}$ miles from railway station at Schenevus on line of D. & H. R. R.; 1 mile from high school; $\frac{1}{8}$ mile from country school; 1 mile from churches; $1\frac{1}{4}$ miles from milk station; 5 miles from cheese factory. Highways, level, state road. Surface of farm, level and rolling. Altitude, 1,300 feet. Soil, sandy loam. Acres in meadow, 110; in natural pasture, 80; in timber, 35, mixed; acres tillable, 190. Fruit, apples. Adapted to all crops grown in this climate. Fences, mostly wire, good condition. House, large, good condition. Old style, roomy barns. Milk house, wagon house, hop kiln and large silo. Watered, house and barns by running spring water; fields, by springs and streams. Occupied by tenant. Reason for selling, to close an estate. Price, \$10,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address S. Hubbard Estate, Schenevus, N. Y.

TOWN OF MIDDLEFIELD

Population 1,671

No. 374.— Farm of 173 acres; located 3 miles from Middlefield; 5 miles from Cooperstown, on line of D. & H. R. R.; 1 mile from school, churches and butter factory; 3 miles from cheese factory and 5 miles from milk station and condensing plant. Highways, fair. Nearest village, Cooperstown, population, 2,634. 5 miles distant, reached by highway. General surface, rolling and level. Nature of soil, gravelly and stony loam.

Acres that can be used as meadow, 148; in timber, 25, maple, hemlock, beech, oak and basswood. Acres tillable, 148. Fruit, apples and plums. Adapted to potatoes, corn, oats, barley, buckwheat and hay. Fences, wire in fair condition. House, 9 rooms, in fair condition. Outbuildings, basement barn 35x70, hay barn 30x40, 2 hog houses, poultry house and hop house 30x40. Watered, barn and house by spring; fields by stream and spring. Occupied by tenant. Reason for selling, ill health. Price, \$2,600. Terms, \$1,600 cash and remainder on mortgage. Address Ida Edick Gray, owner, East Springfield, N. Y. Owner will rent.

TOWN OF MORRIS

Population 1,367

No. 375.— Farm of 100 acres; located $2\frac{1}{2}$ miles from Morris P. O.; $4\frac{1}{2}$ miles from railway station at New Berlin, on line of N. Y. O. & W. and U. V. R. Rs.; 1 mile from school; $2\frac{1}{2}$ miles from church, butter factory and cheese factory; $4\frac{1}{2}$ miles from milk station and condensing plant. Highways, hilly but good. Nearest city, Norwich, population 8,342, 14 miles distant, reached by rail and highway. General surface, hilly. Altitude, 1,800 feet. Acres in meadow, 50; in natural pasture, 45; in timber, 5, hemlock and hardwood. Acres tillable, 90. Fruit, 30 apple trees and some pears. Adapted to corn, hay, oats, buckwheat, etc. Fences, wire and rail, good condition. House, 8 rooms, fair condition. Outbuildings: basement barn, 62x30, good condition; poultry house, good condition. House watered by spring; fields, by spring. Occupied by owner. Price, \$2,000. Terms, half cash, balance on mortgage. Address W. M. Lampher, owner, Morris, N. Y.

No. 376.— Farm of 133 acres; located $3\frac{1}{2}$ miles from South New Berlin P. O., R. D. No. 1, and railway station, on line of N. Y. O. & W. R. R.; 1 mile from school; $3\frac{1}{2}$ miles from churches and butter factory; $1\frac{1}{2}$ miles from cheese factory and $3\frac{1}{2}$ miles from milk station. Highways, hilly, good condition. Nearest city, Norwich, population 8,342, $10\frac{1}{2}$ miles distant, reached by highway. General surface, rolling. Altitude, 1,700 feet. Nature of soil, red clay loam. Acres in meadow, 50; in natural pasture, 30; in timber, 33, 20 acres of hemlock and hardwood, 200 young sugar maples and 13 acres of second growth timber.

Acres tillable, 70. Fruit, 6 pear, 12 cherry, 4 plum and 20 apple trees and 3 grape vines. Best adapted to potatoes, corn, grain and hay. Fences, mostly barbed wire, good condition. Large house in good condition. Outbuildings: barns, in good condition, newly built lean-to, cow stable for 18 head of stock, large horse barn, wagon house, milk house, 2 poultry houses, 2 silos and granary. House watered by well, barns by spring and well, and fields by springs. Occupied by owner. Reason for selling, other business. Price, \$3,000. Terms, cash. Address George H. Wells, owner, South New Berlin, N. Y.

No. 377.—Farm of 80 acres; located 7 miles from Laurens P. O., R. D. No. 1, and railway station, on line of O. & H. trolley; $\frac{1}{2}$ mile from school; $2\frac{1}{2}$ miles from churches; $\frac{1}{2}$ mile from butter factory; $2\frac{1}{2}$ miles from cheese factory; 10 miles from milk station and condensing plant. Highways, hilly but good. Nearest city, Oneonta, population 10,474, 12 miles distant, reached by rail and highway. General surface, rolling. Altitude, 1,825 feet. Nature of soil, clay loam. Acres in meadow, 35; in natural pasture, 30; in timber, 15, hardwood. Acres tillable, 60. Fruit, a few pear, apple and plum trees. Adapted to hay, corn, oats, potatoes, buckwheat and peas. Fences, mostly wire, good condition. House, 9 rooms, good condition. Outbuildings: basement barn, 36x46; silo; 3 poultry houses, 12x12, 12x30 and 14x20; granary, 12x14, all in fair condition. House watered by well, barns by well, and fields by springs. Occupied by owner. Reason for selling, other business. Price, \$2,000. Terms, \$1,200 cash, balance on mortgage. Address A. E. Eaton, owner, R. D. No. 1, Laurens, N. Y.

No. 378.—Farm of 50 acres; located $1\frac{1}{2}$ miles from Morris P. O.; 5 miles from railway station at New Berlin, on lines of N. Y., O. & W. and U. V. R. R.; $1\frac{1}{2}$ miles from school, churches, butter factory and cheese factory; 5 miles from milk station and condensing plant. Highways, good hill roads. Nearest city, Oneonta, population 10,474, 14 miles distant, reached by highway. General surface, rolling. Altitude, 1,300 feet. Nature of soil, clay loam. Acres in meadow, 30; in natural pasture, 15; in timber, 5, hardwood and hemlock. Acres tillable, 50. Fruit, large apple orchard, 6 pear trees. Adapted to all

crops. Fences, wire and board, fair condition. House, 12 rooms, good condition. Outbuildings: 2 barns, cattle shed, shop and hop kiln, all in fair condition. House watered by well, barns by well and brook, fields by brook. Occupied by tenant. Reason for selling, to settle an estate. Price, \$1,000. Terms, half cash. Address Julia A. Winton, owner, Morris, N. Y. Will rent.

No. 379.—Farm of 115 acres; located $1\frac{1}{2}$ miles from Morris P. O., R. D. 1; 9 miles from railway station at New Berlin, on line of Ontario & Western R. R.; $1\frac{1}{2}$ miles from school and churches; $1\frac{1}{2}$ miles from butter and cheese factory and milk station. Nearest city, Oneonta, 14 miles distant, population, 10,474. General surface, level. Altitude, 1,160 feet. Acres in meadow, 35; in pasture, 60; in timber, 20, beech, ash and basswood; acres tillable, 50. Fruit, over 25 apple trees. Best adapted to corn and grains. Fences, barbed wire, fair condition. House, 12 rooms, large woodshed, good condition. Outbuildings: main barn, 30x60; wagon house, 20x30. Sheds, straw barn, granary, all in good condition. House watered by spring and wells; barns, by springs; fields, by brook and spring. Occupied by owner. Price, \$4,000. Terms, $\frac{1}{2}$ cash, balance to suit purchaser. Address, Galen F. Lull, owner, Morris, N. Y.

TOWN OF NEW LISBON

Population 976

No. 380.—Farm of 154 acres; located $\frac{3}{4}$ mile from Garrettsville P. O.; 5 miles from railway station at Edmeston, on line of N. Y., O. & W. R. R.; $\frac{3}{4}$ mile from school and churches; 5 miles from milk station and condensing plant. Highways, good. General surface of farm, fairly level. Altitude, 1,500 feet. Soil, loam. Acres that can be used as meadow, 70; in natural pasture, 64; in timber, 20, beech, birch and maple. Acres tillable, 70. Fruit, 40 apple, 3 pear, 6 plum trees, grapes, currants, gooseberries, strawberries and blackberries. Best adapted to oats, corn, buckwheat and potatoes. Fences, mostly wire, in good condition. House, 26x34, $1\frac{1}{2}$ stories, just completed. Outbuildings: barn, 32x52, with lean-to; barn, 21x30; hog house, new poultry house for 250 hens; all buildings in good repair. House watered by never-failing well, fields by springs and creeks. Occupied by owner. Reason for selling, unable to

work farm. Price, \$4,000. Terms, easy. New 8-room house, all hardwood floors, finished in pine throughout, heated by furnace. Address Mrs W. I. Smith, owner, Garrettsville, N. Y.

No. 381.— Farm of 202 acres; located 2 miles from New Lisbon P. O., and 4 miles from railway station at Mt. Vision, on line of O. & H. R. R.; $\frac{3}{4}$ mile from school; $1\frac{1}{2}$ miles from church; 1 mile from butter factory and cheese factory and 4 miles from milk station. Nearest city, Oneonta, population 10,474, 4 miles distant, reached by rail and highway. Surface of farm, quite level. Altitude, 1,700 feet. Soil, loam. Acres that can be used as meadow, 80; in natural pasture, 80; in timber, 40, hemlock, ash, pine, beech and maple. Acres tillable, 150. Fruit, a good apple orchard with 75 trees and some pear trees. Adapted to corn, oats, buckwheat, potatoes, etc. Fences, wire, good condition. House, 28x36, good condition. Outbuildings, basement barn, 32x50; horse barn, with basement, 30x40; hop kiln. House watered by wells, barns by springs and fields by spring, brooks and creek. Occupied by owner. Reason for selling, unable to work farm. Price, \$4,000. Terms, easy. There is enough timber to pay for place. Address W. I. Smith, owner, Garrettsville, N. Y.

TOWN OF PITTSFIELD

Population 965

No. 382.— Farm of 145 acres; 6 miles from New Berlin, on line of N. Y. O. & V. and U. V. R. Rs.; $\frac{1}{2}$ mile from school; $3\frac{1}{2}$ miles from churches, butter factory and cheese factory, and 6 miles from condensing plant. Nature of highways, hilly. Nearest village, New Berlin, population 1,311; distance, 6 miles. General surface, rolling. Altitude, 1,500 feet. Acres used as meadow, 50; in natural pasture, 10; in timber, 45, hemlock, hard woods. Acres tillable, 100. Fruit, small orchard. Adapted to all kinds of crops. Wire and rail fences. House, 8 rooms, in fair condition. Small barn. House watered by well; barns and fields, by spring. Occupied by owner. Reason for selling, other business. Price, \$2,200. Terms, half cash, balance, mortgage. Address Geo. Whitman, owner, Morris, N. Y.

No. 383.— Farm of 98 acres; located 5 miles from railway station at New Berlin, on O. & W. R. R.; $1\frac{1}{6}$ mile from

school and church; 5 miles from butter factory and milk condensing plant; 4 miles from cheese factory. Highways, hilly but good. Nearest city, Oneonta, population, 10,474, 18 miles distant, reached by highway. Surface of farm, rolling. Altitude, 1,300 feet. Soil, loam. Acres in meadow, 25; in natural pasture, 50; in timber, 23, hemlock, maple and beech. Acres tillable, 50. Fruit, apples, pears, plums, cherries, etc. Adapted to corn, potatoes, oats, peas and buckwheat. Fences, mostly wire, good condition. House, 20x26, with wing, 18x30. Basement barn, 34x60, good condition. Watered by well, spring and creek. Occupied by tenant. Reason for selling, ill health. Price, \$1,600. Terms, half down, balance on mortgage. Address David H. Webster, owner, New Berlin, N. Y., R. D. No. 3.

No. 384.— Farm of 282 acres; located 3 miles from New Berlin P. O., R. D. 5 and railway station on line of N. Y., O. & W. R. R.; $\frac{3}{4}$ mile from school; 3 miles from churches, milk station and condensing plant. Highways hilly. General surface of farm, rolling. Altitude, 1,650 feet. Nature of soil, loam. Acres in meadow, 50; in pasture, 100; in timber, 50, beech, birch, maple, ash and hemlock. Acres tillable, 175. Fruit, 120 trees, apples and plums. Adapted to hay, corn, hops, potatoes and buckwheat. Fences, wire, good. House, $1\frac{1}{2}$ stories, 11 rooms, painted, 2-family. Outbuildings: basement barn, 26x102; wagon house, 24x40; granary, 14x20; milk house, shop, poultry house, ice house and store house. House watered by pump, barns by running water, fields by spring and brook. Occupied by owner. Reason for selling, ill health. Price, \$4,200. Terms, $\frac{1}{4}$ cash, with \$100 yearly and interest semi-annually at 5 per cent. Address Aden J. Angell, owner, New Berlin, N. Y.

TOWN OF RICHFIELD

Population 2,419

No. 385.— Farm of 323 acres; located 2 miles from Richfield P. O.; 4 miles from East Winfield on line of D., L. & W. R. R.; $\frac{3}{4}$ mile from school; 2 miles from churches and cheese factory; 4 miles from milk station. Highways, quite hilly. Nearest village, Richfield Springs, population 1,623, $5\frac{1}{2}$ miles distant, reached by highway. General surface, rolling. Nature of soil, clay loam. Acres that can be used as meadow, 100;

in natural pasture, 150; in timber 60, maple, beech, basswood and elm. Acres tillable, 100. Fruit, 60 apple, 6 pear, 7 plum and 12 cherry trees. Adapted to hay, oats, barley and corn. Fences, mostly wire, in fair condition. House, large stone, in fair condition. Outbuildings, basement barn 90x36, horse barn 30x36 and wagon barn, 27x30. Watered, house by well and cistern; fields by springs and stream. Occupied by owner. Reason for selling, to settle an estate. Price, \$7,500, with tools and supplies \$10,000. Terms, cash. Address Arthur D. Fenton, owner, Richfield, N. Y.

TOWN OF ROSEBOOM

Population 867

No. 386.—Farm of 117 acres; located $\frac{1}{2}$ mile from South Valley; 6 miles from Seward, on line of D. & H. R. R.; $\frac{1}{2}$ mile from school, churches and milk station. Highways, good. General surface, rolling. Altitude, 1,600 feet. Nature of soil, gravelly loam. Acres that can be used in meadow, 65; in natural pasture, 26; in timber 26, hemlock, maple, beech, birch and ash. Acres tillable, 65. Fruit 20 apple, 15 plum, pears and 15 cherry trees. Adapted to oats, barley, buckwheat and corn. Fences, stone and wire. House, 24x32. Outbuildings, barn, 50x38, wagon house 24x40, barn 24x36, shed 20x30 and poultry house 10x20. Watered house and barns by well; fields, by creek. Occupied by owner. Reason for selling, ill health. Price, \$3,000. Address Geo. Bassler, owner, South Valley, N. Y.

TOWN OF WESTFORD

Population 773

No. 387.—Farm of 126 acres; located 1 mile from Westford; 8 miles from Schenevus, on line of D. & H. R. R.; $\frac{3}{4}$ mile from school and cheese factory, 1 mile from church, and 8 miles from milk station. Highways, state road. Nearest village, Worcester, population, 1,020, 6 miles distant, reached by highway. General surface, rolling and level. Altitude, 1,560 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 65; now used as meadow, 40; in natural pasture, 40; in timber, 20, maple, beech and hemlock. Acres tillable, 85. Fruit, apples, plums and pears. Adapted to corn, potatoes, cabbage, hay and oats. Fences, wire, in fair condition. House, 28x30, wing, 18x28, 14 rooms, in good condition. Outbuildings, barn, 36x82, stable 18x32 with concrete floor and room for 30 cattle, horse barn 24x60 and hog house 22x30.

Watered, house and barns by spring; fields by creek and spring. Occupied by owner. Reason for selling, ill health. Price, \$4,500. Terms, \$2,500 cash and remainder on mortgage. Address Joseph Esmay, owner, Westford, N. Y.

No. 388.—Farm of 174 acres; located 3 miles from Milford, on line of D. & H. R. R.; 1 mile from school, churches, butter factory and cheese factory and 3 miles from milk station. Highways, good. Nearest village, Milford, population 560, 3 miles distant, reached by highway. General surface, rolling. Nature of soil, gravel and loam. Acres that can be used as meadow, 75; in natural pasture, 75; in timber, 24, hemlock, chestnut, beech and maple. Acres tillable, 150. Fruit, 50 apple trees. Adapted to corn, oats, potatoes, hay and hops. Fences, wire, in good condition. House, 13 rooms, in good repair. Tenant house in good condition. Outbuildings, barn 40x90, in excellent condition; silo. Watered, house and barns by running water; fields by springs and streams. Occupied by owner. Reason for selling, ill health. Price, \$13,500. Terms, \$8,000 cash and balance on mortgage. Address Owen Eckler, owner, Schenevus, N. Y.

No. 389.—Farm of 100 acres; located 2 miles from Westford P. O.; 9 miles from railway station at Schenevus, on line of Delaware & Hudson R. R.; 2 miles from school, churches, butter factory and cheese factory. Nearest village, Worcester, population 1,020, 7 miles distant, reached by highway. General surface, part hilly. Acres now used as meadow, 11; in natural pasture, 5; in timber, 15, beech and maple. Acres tillable, 70. Fruit for home use. Adapted to corn, potatoes, oats, buckwheat and cabbage. Fences, fair condition, stone, board and wire. House, 6 rooms in good condition. Outbuildings, 2 large barns, and poultry house, good condition. Watered, house, by well and fields by spring. Occupied by owner. Reason for selling, ill health. Price, \$50 per acre. Address, C. Hesse, owner, Westford, N. Y.

No. 390.—Farm of 130 acres; located 7 miles from Schenevus, on line of D. & H. R. R.; 1 mile from churches and milk station. Highways, state road. Nearest city, Oneonta, population, 10,474, 22 miles distant, reached by highway. Acres now used as meadow, 40; in timber, 25, hemlock and hardwood.

FIG. 50.— **BUILDINGS ON FARM No. 388, TOWN OF WESTFORD, OTSEGO
COUNTY.**



Fruit, 75 apple, 5 cherry, 25 plum trees and some berries. Adapted to potatoes, corn and oats. Fences, wire, in fair condition. House, 12 rooms, in good condition. Barn 36x48, cow stable, 38x40, with concrete floor and silo 12x28. Watered, house by well; barns, by running water and fields by brooks and springs. Occupied by owner. Reason for selling, ill health. Price, \$4,500. Terms, \$2,500 cash, balance on mortgage at 5 per cent. Address William Groff, owner, Westford, N. Y.

No. 391.— Farm of 100 acres; located 1 mile from Westford P. O.; 6 miles from railway station at Worcester, on line of D. & H. R. R.; 1 mile from school, churches and cheese factory; 6 miles from milk station. Highways, state road. Nearest city, Oneonta, population 10,474, 18 miles distant, reached by highway. General surface, rolling and hilly. Acres that can be used as meadow, 70; now used as meadow, 30; in natural pasture, 10 and in timber, 20, hard maple and hemlock. Acres tillable, 60. Fruit, 70 apple, 2 pear and 3 cherry trees. Adapted to oats, barley, corn, buckwheat and potatoes. Fences, barbed wire, in fair condition. House, 10 rooms, in good condition. Outbuildings, basement barn, 52x26, cow stable, 52x12, horse stable, 28x16, granary, poultry house and hog house. Watered, house by running water; barns and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$2,000. Terms, ½ cash, balance on mortgage. Address John R. Skinner, owner, Westford, N. Y. Will rent.

No. 392.— Farm of 211 acres; located 1 mile from Westford P. O.; 8 miles from railway station at Schenevus on line of Delaware & Hudson R. R.; 1 mile from school, churches and cheese factory. Highways, state road. Nearest village, Worcester, population 1,020, 6½ miles distant, reached by highway. General surface, part hilly. Acres tillable, 180. Large orchard on farm. Adapted to corn, oats, buckwheat and potatoes. Fences, wire, fair condition. House, large, in good condition. Outbuildings: barn, 60x32; another, 40x25, with basements in both, good condition. Two other barns in fair condition. Silo, 12x28. Occupied by tenant. Price, \$4,000. Terms, one-half down, balance on mortgage. Address C. E. McRorie, owner, Westford, N. Y.

No. 393.— Farm of 150 acres; located 5 miles from Schenevus P. O. and railway station, on line of D. & H. R. R.; R. D.; ½ mile from school; 2 miles from churches, butter factory, cheese factory and milk station. Highways, good. Surface of farm, rolling. Altitude, 1,550 feet. Soil, good. Acres that can be used as meadow, 100; in natural pasture, 10; in timber, 40, pine, oak, chestnut, beech and maple. Acres tillable, 100. Fruit, apples and pears. Best adapted to hay, grain and potatoes. Fences, mostly wire. Houses, one 20x32, wing, 14x24, good condition, painted white; tenant house, 20x32, fair condition. Outbuildings: 2 barns, poultry house, granary, milk house, basement barn, 30x54, with lean-to 16 feet wide, and barn 30x64. Running water in house and barn yard; fields watered by springs. Occupied by owners. Reason for selling, wish to retire. Price, \$3,000. Terms, half cash, balance on mortgage. Address Leslie R. and Harry G. French, owners, Schenevus, N. Y.

No. 394.— Farm of 130 acres; located 1½ miles from Westford P. O.; 9 miles from railway station at Schenevus, on line of D. & H. R. R.; 1½ miles from school, cheese factory and churches. Nearest village, Worcester, population 1,020, 6½ miles distant, reached by highway. General surface of farm, hilly. Altitude 1,600 feet. Nature of soil, good. Acres that can be used as meadow, 60; in natural pasture, 50; in timber, 13, maple and beech. Acres tillable, 75 or more. Fruit, 20 apple trees or more. Adapted to potatoes, oats, corn and buckwheat. Fences, wire, fair condition. House, medium size, fair condition. Three good-sized barns, 1 storehouse, all in good condition. House watered by well, barns by running water, fields by brooks and springs. Reason for selling, unable to look after farm. Price, \$1,800. Terms, \$1,000 cash, balance on mortgage. Address Mrs. John R. Griggs, owner, Worcester, N. Y., R. D. No. 1.

TOWN OF WORCESTER

Population 2,416

No. 395.— Farm of 337 acres; 2 miles from Worcester on line of D. & H. R. R. House and barn old. First-class spring water, also creek. Part cleared; rest being cleared or will be within 2 years, as timber has been sold. Would make

a good sheep farm. Price, \$5,000. Address Silas W. Ferguson, owner, Worcester, N. Y.

No. 396.—Farm of 105 acres; 2 miles from Worcester P. O. and station, on D. & H. R. R. Good soil. Sixty acres pasture and meadow. No buildings. Spring water. Price, \$1,500. Terms, easy. S. W. Ferguson, owner, Worcester, N. Y.

No. 397.—Farm of 122 acres; located 2 miles from Worcester P. O., R. D. No. 3, and railway station, on line of D. & H. R. R.; 2 miles from high school, churches, creamery and milk station. Highways, good. Surface of farm, level

and rolling. Altitude, 1,600 feet. Nature of soil, loam and clay subsoil. Acres in meadow, 40; in natural pasture, 30; in timber, 10, beech, maple and hemlock. All tillable. Some fruit. Adapted to potatoes, hops, oats, buckwheat and dairying. Fences, woven wire. House, in fine condition with first class cellar. Outbuildings: good barns, granary with concrete floor, all in good condition. House watered by well, fields by creek and spring. Occupied by tenant. Reason for selling, other business. Price, \$3,000. Terms, cash or one-third cash, balance on mortgage. Address Silas W. Ferguson or J. S. Waterman, owners, Worcester, N. Y.

PUTNAM COUNTY

Area, 241 square miles. Population, 12,767. Annual precipitation, 54.67 inches. Annual mean temperature, 50.8°. Number of farms, 973. County seat, Carmel.

This county is located in the southeastern part of the state bordering on Connecticut. It is bounded on the west by the Hudson River and is drained by the Croton River and Peekskill Creek.

The surface is hilly, and, while it presents scenery, only a part of the soil is suitable for farming. The Matteawan and Peekskill mountains extend into the western and central parts of the county, while the Taghkanic Mountains are located in the eastern part. Between these ranges is a valley three or four miles wide with black loam soil. This valley extends from the northern border about half way across the county, then broadens into a wide undulating plain containing black and gravelly loam. In the vicinity of Cold Spring and extending east and north is another valley having a clay loam soil. Among its features of interest are the highlands of the Hudson, and Lake Mahopac, a popular summer resort. Marble of excellent quality is extensively quarried and rich mines of iron ore are also found. The leading crops are corn, 124,228 bushels; oats, 19,022 bushels; rye, 4,559 bushels; potatoes, 85,494 bushels; hay and forage, 29,087 tons. Value of all farm property, \$8,851,342, an increase of 14.6 per cent. during the last decade. Domestic animals are as follows: Dairy cows, 8,425; horses, 2,195; swine, 2,392; sheep, 1,220; poultry, 50,167; milk product, 5,080,275 gallons; receipts of dairy products, \$583,016.

The county is traversed by the Harlem and Putnam divisions of the N. Y. C. & H. R. R. R., and the N. Y., N. H. & H. also passes through a portion of the county. There are 56 district schools. Drew Seminary and Female College is located at Carmel. Cold Spring has a large iron plant. Many poultry farms are located in this district. There are six agricultural organizations in the county, the purpose of which is to promote the farmers' interest.

TOWN OF PHILLIPSTOWN

No. 398.—Farm of 129 acres; located 4 miles from Cold Spring P. O.; 4½ miles from railway station, on line of N. Y. C. R. R.; 1 mile from school and church and 40 rods from milk station. Highways, state road. Nearest city, Beacon, population 10,165, 8 miles distant, reached by rail and highway. General surface, rolling. Altitude, 300 feet. Nature of soil, clay loam. Acres used as meadow, 80; in natural pasture, 37; in timber, 12, chestnut, lo-

cust, etc. Acres tillable, 90. Fruit, 20 apple trees, cherries, etc. Adapted to corn, potatoes, rye and wheat. Fences, wire and stone wall, fair condition. House, 56x60, fair condition. Barn, 34x43, poor condition. Watered, house, by wells; barns, by wells; fields, by springs. Occupied by owner. Reason for selling, old age. Price, \$7,000. Terms, ½ cash, balance on mortgage. Address George Wright and Sarah Wheeler, owners, Cold Spring, N. Y.

RENSSELAER COUNTY

Area, 650 square miles. Population, 121,330. Annual precipitation, 42.5 inches. Annual mean temperature, 46°. Number of farms, 3,654. County seat, Troy.

This county is favorably located in the eastern part of the state bordered by Massachusetts on the east and the Hudson River on the west.

The surface is mostly hilly and partly mountainous, the Taconic mountains rising to the height of about 2,000 feet in the eastern part of the county. The Hoosic River Valley divides these into separate ranges.

The soil of this valley is clay and gravelly or slaty loam with hardpan subsoil. The range of hills near the center of the county is excellent for pasturage and dairying, the cultivation of potatoes also bringing good returns. The soil of this section is a conglomerate of sandstone and shale. Between these hills and the Hudson River the land is less rolling and general farming is profitably conducted. The reports on the products of the county are as follows: Corn, 408,503 bushels; oats, 516,979 bushels; buckwheat, 81,974 bushels; rye, 213,343 bushels; potatoes, 1,142,796 bushels; hay and forage, 96,129 tons. The total value of all farm property is \$18,216,934. This is an increase within the last ten years of 19.1 per cent. The average price of improved land in the county is \$35.86 per acre. The buildings in this county are worth one million dollars more than the land. There are farms that can be bought for less than the value of the buildings. Domestic animals are reported as follows: Dairy cows, 19,804; horses, 8,666; swine, 12,081; sheep, 25,190; poultry, 184,489; total production of milk, 10,001,020 gallons; the receipts from dairy products was \$1,198,481.

The county is intersected by the N. Y. C. & H. R. R. R., Fitchburg and the branches of the D. & H. railroads which center at Troy. The Rensselaer Polytechnic Institute, Emma Willard Female Seminary and a Catholic Theological Seminary are located at Troy. The cities of Troy, Rensselaer and Hoosick Falls lie within the county, having a united population of about 100,000 people, and furnish a market for the farm products, while Albany and other nearby cities add to the great market facilities of the county. There are two important electric lines from Rensselaer to Hudson and from Troy to Averill Park in the center of the county. There are numerous lakes, ponds and streams of excellent water, affording abundant supply. There are 162 district schools, 75 miles of state and county roads, 1,202 miles of graded and improved highways, leaving only 11 miles of highway in the county not improved. The soil and climate are excellent for growing apples and other fruit. The farmers of the county have organized 12 different societies to further their farming interest.

TOWN OF BERLIN

Population 1,480

No. 399.—Farm of 110 acres; 2 miles from Berlin P. O. R. D. and railway station on line of Rutland R. R.; 2 miles from school and churches, butter and cheese factory and condensing plant. Nearest city, North Adams, Mass., population 25,000, 13 miles distant, reached by rail and highway. General surface, rolling and hilly. Altitude, 1,000 feet. Nature of soil, slate loam. Acres in meadow, 20; in pasture, 80; in timber, 10, maple, beech, birch, and oak. Acres tillable, 75. Fruit, 75 apple, 12 cherry, 12 plum and 10 pear trees. Best adapted to oats, corn, potatoes and buckwheat. Fences, wire, fine condition. House, 1 story, 11 rooms, good condition. Outbuildings: barn, 32x42; wagon house, 20x26; poultry house, 14x22; hog house, all in good condition. House and barn watered by

spring, fields by brook. Occupied by owner. Reason for selling, has another farm. Price, \$1,600. Terms, cash. Address Henry R. Satterlee, owner, Berlin, N. Y.

No. 400.—Farm of 117 acres, located 1½ miles from Berlin P. O. and railway station on line of N. Y. C. R. R.; 1½ miles from school; 1½ miles from churches and condensing plant. Highways, good. General surface, hilly. Nature of soil, slate and clay loam. Acres in meadow, 40; in natural pasture, 50; in timber, 15, maple, sap bush of 400 trees, some oak. Acres tillable, 65. Fruit, 70 apple, 10 pear and 15 cherry trees, some grapes. Adapted to corn, oats, potatoes and hay. Fences, wire, fair condition. House, 9 rooms, fair condition. Outbuildings: barn No. 1, 36x40; basement barn, 24x30, silo, woodshed. House watered by well, barns

by spring, fields by springs. Occupied by owner. Reason for selling, old age. Price, \$1,700. Terms, on application. Address C. F. Collins, owner, Berlin, N. Y.

No. 401.—Farm of 190 acres; located $1\frac{1}{2}$ miles from Berlin P. O., R. D. No. 1, and railway station on line of Rutland division of N. Y. C. R. R.; $\frac{1}{2}$ mile from school; $1\frac{1}{2}$ miles from school, churches, butter factory and condensing plant. General surface, rolling, some parts rough. Altitude 1,200 feet. Highways, hilly but good. Nature of soil, sandy loam. Acres in meadow, 35; in pasture, 50; in timber, 105, mostly spruce. Acres tillable, 45. Fruit, 100 trees, mostly ungrafted apples. Adapted to strawberries, potatoes and oats. Fences, stone and wire, good condition. House, 32x25, $1\frac{1}{2}$ stories, 6 rooms, good condition; 2 large barns, 4 outbuildings, all need some repair. House watered by spring and well; barns, by spring. 174 ft. water front on Lake Kendall. Price \$2,000. Terms, \$1,500 down, balance on mortgage at 5 per cent. Address Frank R. Auerhahn, owner, South Berlin, N. Y., Box 13. Will rent.

No. 402.—Farm of 92 acres, located $\frac{1}{2}$ mile from South Berlin P. O. and railway station on line of Rutland Division of N. Y. C. R. R.; $\frac{1}{2}$ mile from school and churches; 3 miles from condensing plant; $2\frac{1}{2}$ miles from milk station. Highways, level and good. General surface, hilly. Altitude, 800 feet. Nature of soil, sandy loam. Acres in meadow, 35; in pasture, 25; in timber, 32, maple and beech. Acres tillable, 45 or more. Fruit, 70 apple, 4 pear, 20 plum and 3 cherry trees. Adapted to oats, buckwheat and strawberries. Fences, wire, good condition. House, 34x15, with wing 20x24, good condition. Large ell-shaped barn, wagon house and woodshed; tool and milk house; sap house with evaporator and 370 buckets, all in good condition. House watered by wells; barns, by running water; fields, by springs. Occupied by owner. Price, \$3,000. Terms, \$2,000 down, balance on mortgage at 5%. Address Frank R. Auerhahn, owner, South Berlin, N. Y., Box 13.

No. 403.—Farm of 800 acres; located $1\frac{1}{2}$ miles from South Berlin P. O., and railway station, on line of Rutland R. R.; $1\frac{1}{2}$ miles from school and church;

$4\frac{1}{2}$ miles from cheese factory; $1\frac{1}{2}$ miles from milk station and $4\frac{1}{2}$ miles from condensing plant. Highways, good. Nearest village, Berlin, population 1,500, $4\frac{1}{2}$ miles distant, reached by rail or highway. Surface of farm, level, rolling and side hill. Altitude, 1,500 feet. Nature of soil, good loam. Acres that can be used as meadow, 200; in natural pasture, 100; in timber, 500, birch, maple, beech, oak and spruce. Acres tillable, 200. Fruit, 200 apple, 10 plum, 5 pear and 3 cherry trees. Adapted to all crops. Fences, 5 miles of new woven wire. Large 16-room house, in good condition. Outbuildings: barns, 30x40, 20x40, 30x40 and 24x30—16 barns in all, fair condition. House watered by spring, barns by spring and fields by spring and brook. Occupied by owner. Reason for selling, other business. Price, \$25 per acre. Terms, one-third cash, balance in yearly payments at 6%. Address F. E. Wolcott, owner, South Berlin, N. Y.

TOWN OF EAST GREENBUSH

Population 1,559

No. 404.—Farm of 136 acres; located 2 miles from East Greenbush P. O. R. D. 2; 2 miles from railway station at Elliott's Crossing on line of Albany Southern Railway; $\frac{1}{2}$ mile from school; 2 miles from churches. Highways, state and dirt roads. Nearest city, Albany, population, 107,979, $3\frac{1}{2}$ miles distant, reached by rail and highway. Surface of farm, rolling and level. Soil, mostly dark loam. Acres in meadow, 85; in natural pasture, 18; in timber, 8, oak, pine and hemlock; acres tillable, 120. Fruit, apples, pears, prunes, cherries and grapes. Adapted to grain, hay, potatoes, cabbage and corn. Fences, board and wire, in good condition. 12 room house, in good condition. 1 barn; hay shed; carriage house; wood shed and wash house combined, and poultry house. House is supplied with well and spring water; barn, driven well; fields, springs and creek. Occupied by owner. Reason for selling, owner has two farms and can only work one. Price, \$6,000. Terms, cash preferred; if not, \$3,000 cash and balance on mortgage. Address Jesse Morner, owner, Troy, N. Y., R. F. D. 4. Will rent to party with 20 or more head of stock.

No. 405.—Farm of 150 acres; located $\frac{1}{2}$ mile from East Greenbush P. O., on



FIG. 51.—HOUSE ON FARM NO. 368, TOWN OF EDMESTON, OTSEGO COUNTY.

**FIG. 52.—VIEW ON FARM NO. 408, TOWN OF GRAFTON, RENSSELAER
COUNTY.**

line of Albany Southern R. R.; $\frac{1}{2}$ mile from school, churches and milk station. Highways, dirt and state road. Nearest city, Albany, population 107,979, 5 miles distant, reached by highway and trolley. General surface, rolling. Altitude, 400 feet. Nature of soil, loam. Acres that can be used as meadow, about 60; in natural pasture, 28; in timber, 10, oak, pine, chestnut and hickory. Acres tillable, 140. Fruit, about 4,000 trees, mostly apples, 500 pears, plums and cherries. Adapted to hay and grain. Fences, woven wire, in good condition. House, 6 sleeping rooms, bath, dining room, living room, den and kitchen, also tenant house. Outbuildings, large barns, tool shed, carriage house, tool shop, ice house, poultry house, 20x75, brooder house, 100x16; and incubator cellar. Watered, house and barns by running water; fields by springs. Occupied by owner. Reason for selling, death in family. Price and terms on application. Address Mrs. James Monroe Ruso, owner, East Greenbush, N. Y.

No. 406.— Farm of 77 acres; located $2\frac{1}{2}$ miles from East Greenbush P. O., R. D. No. 2; 2 miles from railway station at Elliott, on line of Albany Southern R. R.; 1 mile from school, $2\frac{1}{2}$ miles from churches and 1 mile from milk station. Highways, good. Nearest city, Albany, population 107,979, 6 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, gravelly loam, good condition of fertility. Acres that can be used as meadow, 22; in natural pasture, 20; in timber, 15, second growth of chestnut and hard wood. Acres tillable, 47. Fruit, 450 apple, about 100 pear, cherry and plum trees. 50 grape vines, 2,000 strawberry and 500 raspberry bushes. Adapted to fruit and general farm crops. Fences, fair. Ten-room house, good condition. Outbuildings, hay barn, stock barn, silo, shop, wagon house and shed; pig pen, new, 80x16, and poultry house. Watered, house, by cistern and well; barns, by well; fields, by springs. Occupied by owner. Reason for selling, other business. Price, \$7,500. Terms, \$3,500 cash, balance on mortgage. Address E. L. Blakesless, owner, East Greenbush, N. Y. R. D. 2.

No. 407.— Farm of 65 acres; located $\frac{1}{2}$ miles from West Sandlake P. O., R. D. No. 1; 5 miles from Rensselaer, on line of B. & A.

and N. Y. C. R. Rs.; 1 mile from school; 3 miles from churches and 5 miles from milk station. Highways, state road. Nearest city, Albany, population 107,979, 5 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, good. Acres that can be used as meadow, 5; in timber, all kinds. Acres tillable, 55. Fruit, pears, cherries, plums, peaches and apples. Adapted to hay, rye, oats, corn and garden produce. Fences, mostly wire, a few rail. House, 2 stories, 10 rooms, good condition. Barn, 46x34, 20-foot posts, new; new wagon house. Watered, house by well and cistern, barns by never failing well; fields by springs. Occupied by owner. Reason for selling, other farms. Price, \$4,500. Terms, cash or small mortgage. Address Elmer J. Hogle, owner, West Sandlake, N. Y.

TOWN OF GRAFTON

Population 948

No. 408.— Farm of 32 acres, located 11 miles from the city of Troy on lines of D. & H., N. Y. C. and B. & M. R. Rs.; $\frac{1}{4}$ mile from school and church. Highways, state road. Auto bus passes door. Surface, rolling. Altitude, 1,100 feet. Soil, sandy loam. Acres in meadow, 20; in natural pasture, 10; in timber, 2, hardwood, etc. Acres tillable, 15. Fruit, apples, pears, cherries, plums, grapes, strawberries and raspberries. Best adapted to potatoes, hay and grain. Fences, mostly wire, good condition. House, 10 rooms, in good condition. Barn, 25x35, good condition, hog house and 2 poultry houses. Watered, house by well, barns by well and fields by spring and creek. Occupied by owner. Reason for selling, ill health. Price, \$1,400. Terms, cash. Address A. B. Jones, owner, Cropseyville, N. Y.

TOWN OF PITTSTOWN

Population 2,887

No. 409.— Farm of 112 acres; located 2 miles from Melrose P. O., R. D. No. 2 and railway station, on line of B. & M. R. R.; $\frac{1}{2}$ mile from school; 2 miles from churches and milk station. Highways, good. Nearest city, Troy, population 75,488, 6 miles distant, reached by highway. General surface, rolling. Nature of soil, clay loam. Acres that can be used as meadow, 20; in natural pasture, any part; in timber, 12, pine and hard wood. All tillable. Fruit, apples. Adapted to general crops. Fences, board

and wire, fair condition. House, 100x45, new. Outbuildings, barns, 75x50, new; 80x40, 40x30, 70x60, 20x40 and 30x40, in good condition. Watered, house, by running water; barns, by same; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$7,000. Terms, \$4,000 cash, balance on mortgage. Address Jacob A. Stover, owner, Melrose, N. Y.

No. 410.—Farm of 76 acres; located 5 miles from Johnsonville P. O., R. D. No. 1; 5 miles from railway station at Johnsonville, on line of B. & M. R. R.; $\frac{1}{2}$ mile from school, 1 mile from churches and 5 miles from milk station. Highways, good. Nearest village, Valley Falls, population 795, 6 miles distant, reached by highway. Nearest city, Troy, population 75,488, 14 miles distant, reached by highway and rail. Altitude, 450 feet. General surface, level. Nature of soil, gravel. Acres that can be used as meadow, 45; in natural pasture, 12; in timber, 19, pine and hard wood. Acres tillable, 45. Fruit, 95 apple, 3 pear and 20 plum trees. Adapted to corn, potatoes, oats, rye and hay. Fences, wire and board, good condition. Ten-room house, fair condition. Outbuildings, new barn 38x50, with basement; new shed; silo, 13x27; poultry house; wagon house and wood shed. Watered, house, by spring and well; barns, by well; fields, by spring and brook. Occupied by owner. Reason for selling, other business. Price, \$2,500. Terms, would like cash. Address Myron Van Namee, owner, Johnsonville, N.Y., R. D. 1.

TOWN OF SCHODACK

Population 4,647

No. 411.—Farm of 106 acres; located 1 mile from South Schodack; 1 mile from Van Hoesen, on line of B. & A. R. R.; $\frac{3}{4}$ mile from school and 4 miles from churches. Highways, good. Nearest village, Castleton, population, 1,583, 4 miles distant, reached by highway. General surface, rolling and level. Nature of soil, sandy loam. Acres that can be used as meadow, 85; in natural pasture, 5; in timber, 10, pine, hemlock and hardwood. Acres tillable, 100. Fruit, about 2 acres of apples. Adapted to hay and grain. Fences, wire in fair condition. House, 12 rooms. Outbuildings, 2 story barn about 40x40, with wagon house attached 30x40, both in

good condition. Watered, house, by well and cistern; barns and fields by creek. Occupied by owner. Reason for selling, to settle an estate. Price, \$5,000. Terms, $\frac{2}{3}$ cash and balance on mortgage. Address Mrs. Max T. Lansing, owner, South Schodack, N. Y.

No. 412.—Farm of 243 acres; located on line of B. & A. R. R.; $1\frac{1}{2}$ miles from Van Hoesen Station, R. D. 1 from Castleton; 10 miles from Albany. Highways, good. Soil, deep, fertile, sandy and gravelly loam. Nearly all tillable; about 10 acres of timber. Fruit, 100 apple trees, also pears and grapes. Surface just rolling enough for natural drainage. Soil adapted to general farming, especially grain, potatoes and hay. Fences, wire, board and rail, good condition. There are two sets of buildings on this farm. The first designated as the Home Farm, has house, 22x24, 2 stories, with wing. Wood house, smoke house and other outbuildings, all in first-class condition. Outbuildings, barn, 40x60, recently built, 28 ft. posts; shed, 20x60, 18 ft. posts; wagon house, 25x60, 18 ft. posts, in first-class condition. No. 2 set of buildings has $1\frac{1}{2}$ story house with complete set of outbuildings, all in good condition. Watered by never failing springs, brooks, 3 wells and 2 cisterns. Fine bed of moulding sand on farm. Reason for selling, owner a widow. For price and terms address Mrs. W. H. Van Vliet, owner, Malden Bridge, N. Y.

No. 413.—Farm of 100 acres; located 1 mile from East Schodack P. O., R. D. No. 1 and railway station, on line of Albany Southern R. R.; 1 mile from school, churches and 3 miles from condensing plant. Highways, hilly, but good. Nearest village, Nassau, population 597, 4 miles distant, reached by rail or highway. General surface, rolling and level. Altitude, 400 feet. Nature of soil, gravel and dark loam, some stony. Acres that can be used as meadow, 50; in natural pasture, 9; in timber, 8, pine, oak and hickory. Acres tillable, 90. Fruit, apples, pears and plums. Adapted to rye, oats, corn and berries. Fences, wire, fair condition. House, 24x30, with wing 24x28, good condition. Outbuildings, barn 38x45, with lean-to 24x40 and 24x28; carriage house 30x40, and hog house. Watered, house, by well; barns, by well; fields, by springs. Occupied by owner. Reason

FIG. 53.—VIEW ON FARM No. 412, TOWN OF SCHODACK, RENSSELAER COUNTY.



for selling, wish to retire. Price, \$4,500. Terms, \$2,500 cash, balance on mortgage. Address A. J. Poyneer, owner, Nassau, N. Y., R. D. No. 1.

trees bordering highway near center of farm. Address Charles M. Winne, owner, Castleton, N. Y.

No. 414.— Farm of 137 acres; located 9 miles south of Albany P. O., R. D. No. 1; 2 miles from railway station at Brookview or Van Hoesen, on line of B. & A. R. R.; $\frac{1}{3}$ mile from school; 4 miles from churches. Highways, good. Nearest city, Albany, population 107,979, 9 miles distant, reached by rail. General surface, 70 acres nearly level and about 30 acres of deep rich black muck, ideal for growing onions or other vegetables (70 acres in wheat and rye); sandy loam. Acres that can be used as meadow, all; in timber, 20, maple and white birch. Acres tillable, 90. Fruit, 100 apple trees, all varieties. Ideal soil for fruit trees. Fences, poor condition. No dwelling house. Barn 30x50, good condition; watered by well nearby. Reason for selling, other business. Price \$4,000. Terms: $\frac{1}{2}$ cash, balance on mortgage. The highway nearly divides the farm and the natural lay of the land must be seen to be appreciated, one of the features being 50 beautiful maple

TOWN OF STEPHENTOWN

Population 1,287

No. 415.— Farm of 180 acres; located 2 miles from Stephentown P. O., and railway station on line of Rutland R. R.; $1\frac{1}{2}$ miles from school and churches; 4 miles from cheese factory; 2 miles from milk station. Highways, state road. General surface, level and rolling. Acres in meadow, 70; in pasture, 60; in timber, 50, chestnut, pine, hemlock and hardwood, 200 sugar maples. Fruit, apples, variety, 75 trees. Best adapted to oats, corn and potatoes. Fences, stone wall and woven wire. House, 28x36, in good condition. Outbuildings: barns, 50x28; 48x48; 18x30; 24x34 and 16x24. House and barns watered by piped spring water, fields by brook. Occupied by owner. Reason for selling, advanced age. Price, \$4,000. For stock and tools included, \$5,000, which includes 12 cows, 2 horses, and grain and forage. Address E. P. Quinlan, owner, Stephentown Center, N. Y.

ROCKLAND COUNTY

Area, 200 square miles. Population, 46,903. Annual precipitation, 51.73 inches. Annual mean temperature, 48°. Number of farms, 1,133. County seat, New City.

This county is located in the southeastern part of the state, bordering on New Jersey. The Hudson river forms its boundary on the east and it is drained by the Ramapo and Hackensack Rivers.

The surface is mostly hilly or mountainous. In the western part are found the Ramapo Mountains, which are steep, rocky and barren. The southern part of the county, and the level valley of the Hackensack River lying back of the Highlands of the Hudson, contain a very fertile soil of sandy loam; in this locality, dairying, poultry raising and vegetable and small fruit growing are conducted with great profit. Extensive deposits of clay and sand are found along the shores of the Hudson and brick-making is a leading industry. The crops reported are as follows: Corn, 81,576 bushels; oats, 17,680 bushels; rye, 13,826 bushels; potatoes, 66,909 bushels; hay and forage, 11,224 tons. The value of all farm property is \$11,194,649, an increase of 98.9 per cent. over the value of 1900. This increase of \$58.70 per acre represents the largest per cent. of gain in farm property of any county in the state, except Westchester. The average value of improved land in the county is \$185 per acre. Domestic animals on 958 farms are as follows: Dairy cows, 2,268; horses, 2,040; swine, 1,200; sheep, 421; poultry, 71,792; production of milk, 1,140,804 gallons, which sold for \$148,179. There are no milk stations or factories in the county, the milk being shipped direct to New York City, which is only 32 miles from the county seat. Much trap rock is quarried in this region, where it is crushed for use in road making or mixed with cement for concrete structures. There are 47 district schools in the county. The agricultural organizations consist of one grange, one county agricultural association and a county industrial association.

No. 416.— Farm of 127 acres, located 2 miles from Roscoe P. O., R. D. and railway station, on line of O. & W. R. R.; $\frac{1}{8}$ mile from school; 2 miles from

churches, butter factory, cheese factory, milk station and condensing plant. Highways, good. General surface, level. Altitude, 1,800 feet. Nature of soil,

sandy. Acres in meadow, 40; in natural pasture, 60; in timber, 27, hardwood. Acres tillable, 25. Fruit, 216 apple and 4 pear trees. Best adapted to hay, oats, wheat, etc. Fences, barbed wire, good condition. House, 86x28x36, good condition. Outbuildings: barn, milk house, ice house, cottage, sap house, poultry

house, good condition. Watered: house piped from spring, fields, by trout stream. Reason for selling, poor health. Price, \$10,500. Terms, \$7,000 cash, balance on mortgage. This place has been used as boarding house, accommodating 100 people. Address Frederic A. Swick, owner, Roscoe, N. Y.

ST. LAWRENCE COUNTY

Area, 2,296 square miles. Population, 90,291. Annual precipitation, 34.85 inches. Annual mean temperature, 49.3°. Number of farms 8,224. County seat, Canton.

This county is located in the northern part of the state bounded on the northwest by the St. Lawrence River which separates it from Canada. The land area in this county is the largest in the state. It is intersected by Indian, Grass, Oswegatchie, Raquette and St. Regis rivers.

The surface is mostly hilly except a strip about eighteen miles wide, which extends along the St. Lawrence River, the soil of which is rich clay loam. In the southeastern section are the foothills of the Adirondacks, which consist of a series of hills and deep valleys. In these valleys we find a dark slaty and gravelly loam. The hills extend in broad ridges, the soil of which is a fertile clay loam. About 700,000 acres in the county are covered with forests of pine, sugar maple, oak, birch, elm, beech, and other trees. Among the minerals are granite, iron ore, lead, limestone and Potsdam sandstone. Among the crops produced in this county are: corn, 315,811 bushels; oats, 1,792,670 bushels; potatoes, 1,184,162 bushels; barley, 75,975 bushels; buckwheat, 63,916 bushels; hay and forage, 412,612 tons. The value of all farm property, improvements, tools and live stock is \$49,975,175. This represents an increase of 39.6 per cent. over the valuation shown in 1900. The average value of improved land per acre is \$36.39. The number of domestic animals are: dairy cows, 100,537; horses, 22,665; swine, 33,935; sheep, 18,513; poultry, 315,991. The county leads in the production of milk, hay and forage; the production of the former being 47,654,538 gallons, the value of which with the products of 158 milk stations and factories was \$4,435,441. Lumber is one of the chief exports as is also maple sugar. The county is intersected by the Central Vermont, R., W. & O. and Grand Trunk railroads. At Canton is located the St. Lawrence University (Universalist). A state normal school is located at Potsdam. Massena Springs is a well known watering place. The large towns and the numerous smaller villages, with many manufacturing towns in New England and New York City furnish unlimited markets for all the products. There are 375 district schools in the county, 69 miles of state and county roads, 3,149 miles of other improved highways. Forty-six agricultural organizations conserve the agricultural interest of the county.

TOWN OF CANTON

Population 6,777

No. 417.—Farm of 140 acres; $\frac{3}{4}$ mile from Eddy P. O.; 4 trains on N. Y. C. stop daily within 40 rods of house. Highways, good; state road. Clay loam soil. Acres in meadow, 70; natural pasture, 50; timber, 20, maple and beech; acres tillable, 120. Fruit, apples, also currants and berries. Occupied by tenant. Fences, woven wire and rail, good condition. House, 19x30, good cellar, good condition. Large barn, 126 feet long, with stable underneath, concrete floor; granary, and new milk house with concrete floor, in good condition. Watered by well and brook. This farm will keep 30 cows and team of horses

and have hay to sell. For price and terms, address C. T. Humphrey, owner, Canton, N. Y., R. F. D.

TOWN OF MADRID

Population 1,471

No. 418.—Farm of 150 acres; located about 1 mile from Madrid P. O., R. D. 2, 1 mile from railway station at Madrid Springs, on line of Rutland R. R.; 1 mile from school, churches, butter factory, milk station and cheese factory; Highways, good. Nearest city, Ogdensburg, population 14,338, 17 miles distant, reached by rail and highway. Surface of farm, level and slightly sloping. Altitude, about 300 feet. Soil, loam. Acres in timber, 32, 7 acres of which are

FIG. 54.—HOUSE ON FARM NO. 418, TOWN OF CORINTH, SARATOGA COUNTY.



fine maple-sugar bush, remainder, elm, pine, ash, cedar, spruce, oak, basswood, beech, and birch, first and second growth. Acres tillable, 124. Fruit, enough for home use. Adapted to dairying, hay, corn, barley, wheat, buckwheat, potatoes, etc. Fences, stone and rail, in good condition. House, 1½ stories, 11 rooms and large wood shed attached, good condition. Outbuildings, barn, 45½x100, built in 1898, shed attached, one old barn, granary, hog and poultry

house, pump and separator house with new gasoline engine and pump jack attached to wind mill pump, and sugar house. Buildings painted in 1915. Watered, house, by well and cistern; barn, by well; fields, by springs. Occupied by tenant. Reason for selling, owner a teacher and cannot attend to farm. Price, \$8,500. Terms, \$3,500 cash, balance on mortgage at 5%. Address M. Hall, owner, Madrid, N. Y. Will rent with option to buy.

SARATOGA COUNTY.

Area, 800 square miles. Population, 62,982. Annual precipitation, 35.41 inches. Annual mean temperature, 47°. Number of farms, 3,611. County seat, Ballston Spa.

This county is located in the eastern part of the state, bounded on the east by the Hudson River and on the south by the Mohawk River, and is intersected by the Sacandaga River in the northwestern portion. The northern part of the county is tillable in the Sacandaga Valley and along the Hudson River. Toward the center of the county, the surface becomes less rugged and is adapted to pasturage and dairying, the soil being a sandy and gravelly loam. To the southwest, most of the soil is slate and clay loam and to the southeast, clay loam predominates. In the latter section, there are quite a number of sand spots which are not fertile.

The surface is extensively covered with forests of ash, beech, elm, chestnut, hickory, oak and sugar maple. The county contains several lakes, Saratoga Lake being the largest. Some of the leading crops are: corn, 482,561 bushels; oats, 435,812 bushels; buckwheat, 130,163 bushels; rye, 103,261 bushels; potatoes, 579,652 bushels; hay and forage, 75,421 tons. The value of all farm property is \$15,960,106. The average value of farm lands per acre is \$15.47 and of improved land, \$32.03; a slight gain over the values of 1900. The domestic animals number: dairy cows, 16,224; horses, 8,115; swine, 10,612; sheep, 11,483; poultry 178,318; production of milk was 7,203,456 gallons which with its products sold for \$726,945.

The county is intersected by the Champlain Canal, the Delaware and Hudson, Fitchburg and Mt. McGregor railroads. The southeastern part of the county is traversed by electric lines from Saratoga to Schenectady, Albany, Troy, Mechanicville and Fort Edward. Most of the products of the county are demanded by the local markets of Saratoga Springs, Ballston Spa, etc. Saratoga Springs is one of the most fashionable summer resorts in the world. Here are more than twenty mineral springs, some of which are of great celebrity and are of recognized medicinal value. These springs are now owned by the state, being one of the results accomplished in the movement for the conservation of the natural resources of the state now being rapidly developed. The county contains 195 district schools, 74 miles of state and county roads, 1,011 miles of improved highways; and 18 agricultural organizations are aiding the individual farmers throughout the county.

TOWN OF CORINTH

Population 2,661

No. 418.— Farm of 80 acres; 1 mile from Palmer P. O.; 3 miles from Corinth railway station, on line of D. & H. R. R.; ¼ mile from school; 2 miles from churches. Saratoga Springs, population 13,792, 12 miles distant, reached by rail and highway. One mile from state road. Surface of farm, rolling and level. Soil, sandy loam and clay, also 3 or 4 acres of muck. Acres in meadow, 30; in natural pasture, 35; in alfalfa, 1; in timber, 15, pine, hemlock, hard wood;

acres tillable, about 50. Fruit, 50 apple trees, cherries, strawberries and grapes. Sugar maple orchard of about 150 trees. Best adapted to potatoes, corn, gardening, etc. Fences, wire and rail, in fair condition. House, 2 stories, good condition, main part 22x32, kitchen and woodshed, 18x26. Outbuildings: barn, 30x40; barn, 28x30; barn, 28x32, good condition; 2 poultry houses, hog house; sugar house; well house, new silo and other outbuildings. Watered, house, by well and cistern; barns, by well and spring;

fields, by running water; $\frac{3}{4}$ mile from Hudson river; 3 miles from Lake Boneta; 5 miles from several other lakes. Occupied by owner. The International Pulp and Paper Mills are located near farm, so there is good market. Reason for selling, poor health of owner. Price, \$4,000. Terms, \$2,000 cash, remainder on mortgage. Address Mrs. William B. Storey, owner, Corinth, N. Y., R. D. 1.

No. 420.—Farm of 180 acres; located $2\frac{1}{2}$ miles from Corinth P. O., R. D. 1; 4 miles from Corinth railway station, on line of D. & H. R. R.; 1 mile from school; $\frac{1}{4}$ mile from churches. Population of Corinth, 2,415, reached by state highway. Altitude, 200 feet. Nature of soil, sandy loam. Acres that can be used as meadow 50; in pasture, 90; in timber, 40, hemlock, beech, maple, basswood and chestnut. Acres tillable, 60. Fruit, 4 old orchards; 200 young trees in new orchard. Best adapted to dairying and general farming. Occupied by owner. Fences, mostly wire, in good condition, others not so good. House, new, stone and concrete, 2 stories, 49x60, wing 29x32. Outbuildings: stone horse barn, 38x60; stone cow barn, 45x68; stone sheep barn, 39x27, all new, in good condition, partly unfinished. House watered by drilled well, fields by streams. Occupied by owner. Reason for selling, death of son and daughter, who were most interested. Price, \$16,000. Terms, cash, might take mortgage for part. Address M. L. Davis, owner, R. D. 1, Corinth, N. Y.

No. 421.—Farm of 63 acres; located $3\frac{1}{2}$ miles from Corinth P. O., R. D. 1; 1 mile from railway station at South Corinth on line of D. & H. R. R.; $\frac{1}{4}$ mile from school; $1\frac{1}{2}$ miles from churches. Highways, good. Nearest village, Corinth, population 2,415, $3\frac{1}{2}$ miles distant, reached by rail or highway. Surface of farm, rolling. Soil, clay loam. Acres in meadow, 20; in natural pasture, 15; in timber, 13, consisting of hard wood, pine and hemlock; acres tillable, 35. Fruit, apples. Adapted to corn, potatoes, oats and buckwheat. Fences, wire. Eleven-room house, in good condition; 1 barn; corn barn; poultry house, in fair condition. House and barns are supplied with well water; fields, by streams. Occupied by owner. Reason for selling, owner is a

widow and unable to take charge of place. Price, \$2,500. Terms, cash. Address Mrs. T. J. Comstock, owner, Corinth, N. Y.

No. 422.—Farm of 110 acres; located $2\frac{1}{2}$ miles from Corinth P. O., R. D. No. 1, and railway station, on line of D. & H. R. R.; $\frac{1}{2}$ mile from school; $2\frac{1}{2}$ miles from churches and 4 miles from butter factory. Highway, good. General surface, rolling. Altitude, 600 to 700 feet. Nature of soil, sandy loam, good quality. Acres that can be used as meadow, 50; in natural pasture, 25; in timber, 35, pine, hemlock and hard wood. Acres tillable, 75. Fruit, about 400 apple, 15 pear and 55 cherry trees, 1,000 raspberries, 400 blackberries and strawberries. Best adapted to corn and general farming. Fences, wire and stone wall, good condition. House, 7 rooms, metal roof, good condition. Outbuildings, barn 30x80 with addition, corn house, poultry house 12x35 and silo. House watered by well, barns, by well, fields by spring and brook. Hudson River, $2\frac{1}{2}$ miles distant; foot hills of the Adirondack Mountains near and in plain view. Occupied by tenant. Reason for selling, other business. Price, \$4,000. Terms, \$2,000 cash, balance on mortgage. Address Harry S. Shorey, owner, Corinth, N. Y.

TOWN OF EDINBURG

Population 785

No. 423.—Farm of 80 or more acres; located $\frac{1}{4}$ mile from Edinburg P. O.; 4 miles from railway station at Northville, on line of Fonda, Johnstown and Gloversville R. R.; $\frac{1}{4}$ mile from school; 60 rods from churches. Highways, good. Nearest city, Gloversville, population 21,178, 18 miles distant, reached by rail or highway. General surface, level. Nature of soil, loam, good. Acres that can be used as meadow, 60; in meadow, 50; in natural pasture, 11; in timber, 25, beech, birch and maple. Acres tillable, 60. Fruit, all kinds of berries, cherries, currants, etc. Fences, woven wire, first class condition. House, 50x26, with wing, good condition. Outbuildings: 1 barn, 70x30, basement under all; corn house, $13\frac{1}{2}$ x $15\frac{1}{2}$; pig pen, $17\frac{1}{2}$ x $15\frac{1}{2}$; ice house, $13\frac{1}{2}$ x $18\frac{1}{2}$; poultry house, 36x14, new. Watered, house by 2 wells and cistern; barns, by running water; fields, by spring and tiling. Occupied by owner. Reason for selling, ill health.

FIG. 55.—HOUSE ON FARM No. 424, TOWN OF GALWAY, SARATOGA COUNTY.



Price, \$5,000. Terms, cash. Price includes tools complete, 8 cows, 2 horses and 100 hens. Will take \$3,000 for farm alone. Address H. F. Lawton, owner, Northville, N. Y.

TOWN OF GALWAY

Population 1,278

No. 424.— Farm of 177 acres, 11 miles from Amsterdam; 6 miles from railway station at Broadalbin, on line of F. J. & G. R. R.; $\frac{1}{4}$ mile from school and $1\frac{1}{2}$ miles from churches. Twenty-five acres of tillable land, which would be enough to take care of the place; 81 acres in woods, 5 acres of which is a fine pine grove. The lake covers 65 acres, fed by trout streams, and there is fine fishing. The soil is a sandy loam. There is a new house of 17 rooms and the attic could be finished off for 2 or 3 more rooms; porch, 10x80. A 2-story camp in the pine grove; 2 cottages in pine grove, 12x20 each. Barn, 28x40; barn, 17x35; wagon house, 20x26; granary, 12x20; ice house, 12x12; hog house, 12x14; another building, 22x50, that could be made into a camp. Price, \$5,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address A. A. Butterfield, owner, Hagaman, N. Y., R. D. 2.

TOWN OF GREENFIELD

Population 1,642

No. 425.— Farm of 100 acres; $1\frac{1}{2}$ miles from Middle Grove P. O., R. D. 2; $1\frac{1}{2}$ miles from railway station on line of E. N. Y. R. R.; $\frac{1}{4}$ mile from school; $1\frac{1}{2}$ miles from churches and milk station; $3\frac{1}{2}$ miles from butter factory. Highways, somewhat hilly but good. Nearest city, Saratoga Springs, population 13,792, $8\frac{1}{2}$ miles distant, reached by rail and highway. Surface, rolling and level. Acres in meadow, 30; in natural pasture, 45; in timber, 25, pine, hemlock, chestnut and hard wood. Acres tillable, 75. Fruit, 20 apple, 4 plum and 4 cherry trees. Best adapted to corn, oats, buckwheat and vegetables. Fences, stone, rail, fair condition. House, 2 stories, 22x32; 2 wings, 13x18, hot and cold water. Outbuildings: barn, 26x47; cow stable, 13x24; wagon house, 18x24; tool house, 13x20; poultry house and hog house. Watered by well, spring and creek; water also pumped in house and barn by hydraulic ram. Lake Desolation, a summer resort, is about 2 miles

from farm. Reason for selling, poor health of owner. Price, \$3,000. Address Samuel Kilmer, owner, Greenfield Center, N. Y., R. D. 2.

No. 426.— Farm of 70 acres; located 2 miles from Greenfield Center P. O.; $2\frac{1}{2}$ miles from Kings, on line of D. & H. R. R.; 3 rods from school; 2 miles from churches, milk station and condensing plant; $2\frac{1}{2}$ miles from butter factory and cheese factory. Highways, state road. Nearest city, Saratoga Springs, population 13,792, $8\frac{1}{2}$ miles distant, reached by rail and highway. General surface, mostly level. Altitude, 700 feet. Nature of soil, rich and sandy loam. Acres that can be used as meadow, 30; in natural pasture, 30; in timber, 20, pine, hemlock, ash, chestnut and oak. Acres tillable, 40. Fruit, 100 apple, 6 cherry, 2 plum, 2 pear trees and some grapes, raspberries and strawberries. Adapted to corn, oats, potatoes, alfalfa and clover. Fences, woven and barbed wire, in fine condition. House, $23\frac{1}{2}$ x51 of 12 rooms with summer kitchen 15x25. Outbuildings: carriage barn, 27x40; barn, 20x43; barn, 20x41; poultry houses, $10\frac{1}{2}$ x25 $\frac{1}{2}$ and 7x9, all in good condition. Watered, house and barns by spring piped; fields by creeks and springs. Occupied by owner. Reason for selling, other business. Price, \$3,500. Address William H. Stolting, owner, Greenfield Center, N. Y.

No. 428.— Farm of 98 acres; located 5 miles from Greenfield Center P. O.; 3 miles from Kings, on line of D. & H. R. R.; $\frac{1}{4}$ mile from school and $2\frac{1}{2}$ miles from churches. Highways, good. Nearest city, Saratoga, population 13,792, 8 miles distant, reached by rail and highway. General surface, rolling. Altitude, 800 feet. Nature of soil, sandy loam. Acres that can be used as meadow, 45 to 50; in natural pasture, about 25; in timber, 10, hemlock and pine. Acres tillable, 45. Fruit, about 40 apple, 8 pear, 7 plum, 1 peach, 6 cherry and 2 quince trees, also currants, grapes, strawberries and raspberries. Adapted to corn, potatoes, buckwheat, oats, rye and millet. Fences, wire, in good condition. House, 40x36, in good condition. Outbuildings: barn 30x25, in fair condition, large poultry house and hog house in good condition. Watered, house by well; barns and fields by stream. Occupied by owner. Reason for selling, wishes to retire. Price and

terms on application. Address Mrs. T. E. Allwood, owner, Greenfield Center, N. Y., R. D. 2.

No. 429.—Farm of 100 acres, located $1\frac{1}{2}$ miles from railway station at Kings on line of D. & H. R. R.; $\frac{3}{4}$ mile from school; 2 miles from churches and $1\frac{1}{2}$ miles from butter factory. Highways, good country road. Nearest village, Corinth, population 2,415, distance 6 miles. Surface, gentle slope. Altitude, 600 feet. Nature of soil, sand and gravel loam. Acres in meadow, 25; in natural pasture, 25; in timber, 60, hemlock, pine, chestnut, and hardwood. Fruit, 100 young trees, plums, pears and apples. Adapted to potatoes, corn, fruit, truck gardening and general farming. Fences, partly new, wire, remainder in fair condition. House, 26x36 and wing. Outbuildings: cow barn, 30x40, carriage house and shed, 26x52. House watered by well, barns by spring, fields by spring and brook. Adirondack Mountains in the distance. Occupied by tenant. Reason for selling, owner has other business. Price, \$2,000. Terms, cash \$1,000, balance easy payment. Address Isaac Densmore, owner, Corinth, N. Y. Will rent at \$200 per year.

No. 430.—Farm of 123 acres; located $1\frac{1}{2}$ miles from Saratoga P. O., R. D.; $\frac{1}{2}$ mile from railway station at Saratoga Springs; $1\frac{1}{2}$ miles from school, churches and milk station. Nature of soil, sand, gravel and loam. Acres in meadow, 50; in pasture, 30; in timber, 25, pine, oak and hickory. Acres tillable, 50. Fruit, apples 35 trees, pears 5, plums 6. Best adapted to truck gardening. Fences, wire, good. House, 30x60, 15 rooms, good condition. Outbuildings: barn 30x52, shed attached, poultry house 30x20, ice house, shop over it, 15x25, open shed for wagons, 40 feet. House watered by reservoir, barns by driven well, fields by springs. Occupied by owner. Reason for selling, advanced age. Small pond on farm. Price, \$5,000. Terms, \$3,000, balance on mortgage. Address Charles P. Cronkhite, owner, Saratoga Springs, N. Y.

TOWN OF MALTA

Population 1,298

No. 431.—Farm of 54 acres; located 4 miles from Ballston Spa P. O., R. D. No. 3 and railway station, on line of D.

& H. R. R.; $\frac{1}{10}$ mile from school; $\frac{1}{4}$ mile from churches; 4 miles from butter factory and milk station. Nearest city, Saratoga Springs, population 13,792, 5 miles distant, reached by state road. General surface, rolling. Altitude, 300 feet. Nature of soil, part sand, part gravelly loam. Acres in meadow, 10; in pasture, 7; in timber, 3. Acres tillable, 34. Fruit, 25 apple trees, variety. Best adapted to gardening and grain. Fences, wire, good condition. House, $1\frac{1}{2}$ stories, 13 rooms, 30x50. Outbuildings: barn, 30x40 with 13 ft. posts; carriage house, 20x40, poultry house, etc., all in good condition. Saratoga Lake, $\frac{3}{4}$ mile distant. Occupied by owner. Reason for selling, to settle an estate. Price, \$3,000. Terms, cash. Address Charles N. Riley, owner, R. D. No. 3, Ballston Spa, N. Y.

No. 432.—Farm of 112 acres; located 3 miles from Ballston Spa, on line of D. & H. R. R.; $\frac{1}{4}$ mile from school; $\frac{1}{8}$ mile from church and 3 miles from butter factory. Highways, good. Nearest city, Saratoga Springs, population 13,792, 4 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, sandy. Acres that can be used as meadow, 30; in natural pasture, 30; in timber 7, hemlock and hardwood. Acres tillable, 45. Fruit, apples, plums and cherries. Adapted to all kinds of farm products and garden truck. Fences, wire, in good condition. House, 12 rooms. Outbuildings: barn 32x55, wagon house, poultry house, ice house and corn house. Watered, house by well and cistern, barns by running water and fields by creek. Unoccupied. Reason for selling, to settle an estate. Price, \$4,200. Terms, cash. Address Bertha M. Cole, owner, Hyde Boulevard, Ballston Spa, N. Y.

TOWN OF MOREAU

Population 3,240

No. 433.—Farm of 50 acres; located $\frac{3}{4}$ mile from South Glens Falls P. O.. $1\frac{1}{2}$ miles from railway station at Glens Falls on line of D. & H. R. R.; $\frac{1}{4}$ mile from school; $\frac{1}{2}$ mile from churches; 2 miles from butter factory and milk station. Highways, good. Nearest city, Glens Falls, population 16,323. 1 mile distant, reached by highway and trolley. General surface, nearly level. Nature of soil, sandy loam. Acres in natural pasture, 40. Acres tillable, 40. Fruit, 25

56.— HOUSE ON FARM No. 425, TOWN OF GREENFIELD, SARATOGA
COUNTY.

Fig. 57.— HOUSE ON FARM No. 433, TOWN OF MOREAU, SARATOGA COUNTY.

apple trees. Adapted to all kinds of crops. House, 12 rooms, brick, in good condition. Large barn, not very good. Watered, house, by city water; fields, by several springs. Occupied by tenant. Reason for selling, wishes to retire. Price, \$1,800. Fifty acres of this farm borders on Hudson River. Address Miss Harriet A. Bentley, owner, 11 Pine street, Glens Falls, N. Y. Will rent.

TOWN OF SARATOGA

Population 3,814

No. 434.— Farm of 121 acres; 3 miles from Wayville P. O., R. D. 1; 1 mile from railway station at Cedar Bluff on line of B. & M. R. R.; 1 mile from school; 2 miles from church; 6 miles from butter factory; 1 mile from milk station. Highways, level and smooth. Nearest city, Saratoga Springs, population 13,792, 5½ miles distant, reached by rail and highway. Surface, level, no stone. Soil, good, heavy sand loam. Acres in meadow, 50; in natural pasture, 25; in timber, 15, oak, chestnut and pine; acres tillable, 100. Fruit, pears, plums, cherries, peaches and 5 acres of choice apples. Adapted to potatoes, corn, oats, rye, wheat and barley. Fences, American wire and rail, good condition. House, 2 stories, 14 rooms, in good condition. Large hay barn, horse barn, wagon house, hog house and corn house, all in good condition. Watered by well and spring. One mile from Saratoga Lake. Occupied by owner. Reason for selling, old age. Price, \$6,000. Terms, \$4,000 down, balance on mortgage. Address David P. Robins, owner, Wayville, N. Y., R. D. 1.

No. 435.— Farm of 167 acres; located ½ mile from railway station at Burgoyne, on line of B. & M. Ry.; ¼ mile from school; 6 miles from churches of all denominations and milk station; 2½ miles from butter factory; 7 miles from milk condensing plant. Highways, state road. Nearest city, Saratoga Springs, population 13,792, 6 miles distant, reached by rail and highway. Surface of farm, rolling. Soil, clay, sand and gravel loam. Acres in meadow, 40; in natural pasture, 22; in timber, 9, pine and chestnut. Acres tillable, 100. Fruit, 45 apple, 6 cherry and 10 plum trees, also small strawberry patch. Best adapted to dairying or general farming. Fences, barbed wire and rail, fair condition. House, 2½ stories, 2 family, 18 rooms, good condition. Outbuildings: 2

barns, one 30x52, one 20x40, shed, carriage house, poultry house, ice house and smoke house, all in good condition except one barn and shed. Watered, house, by spring; barn, by drilled well; fields, by creek. Occupied by owner and tenant. Price, \$9,000. Terms, ½ cash, balance on bond and mortgage. Fifteen acres of moulding sand on farm. Address Chauncey A. Wooley, owner, Saratoga Springs, N. Y., R. D. 1. Will rent.

No. 436.— Farm of 60 acres; located 5 miles from Saratoga Springs P. O., R. D. No. 1; ½ mile from Cedar Bluff railway station on line of Boston and Maine R. R.; 2 miles from school; 5 miles from churches; ¼ mile from milk station. Nearest city, Saratoga, population 13,972, 5 miles distant, reached by rail or good gravel highway. General surface, gently sloping. Altitude, 420 feet. Nature of soil, clay and gravelly loam. Acres in meadow, 48; in timber, 8, ash, maple and elm. Acres tillable, 48. Fruit, 30 apple trees, varieties, also a number of young trees. Adapted to grain and hay. Fences, rail, barbed and cable wire, need some repairs. House, 12 rooms, in fair condition. Outbuildings: carriage and horse barn, 40x26; hog house, 20x30, 2 stories; poultry house, 12x24; carriage house needs repair. House and barns watered by piped spring; fields, by brooks. Saratoga Lake adjoins farm. Occupied by owner. Reason for selling, other business. Price, \$3,500. Terms, cash. Address Wm. W. Munro, owner, R. D. 1, Saratoga Springs, N. Y.

No. 437.— Farm of 87 acres, located 4 miles from Wayville P. O., R. D. 1; 1 mile from railway station at Cedar Bluff on line of Boston & Maine R. R.; 1 mile from school; 3 miles from churches; 6 miles to butter factory; 1 mile from milk station. Nature of highways, good. Nearest city, Saratoga Springs, population 13,792, 6 miles distant, reached by highway. General surface, rolling. Altitude, 350 feet. Nature of soil, slate loam. Acres in meadow, 25; in pasture, 10. Acres tillable, 75. Fruit, 225 apple, 65 pear and 25 plum trees. Best adapted to potatoes and fruit. Fences, woven wire, good. House, 11 rooms, 25x31; wing, 15x18, good condition. Outbuildings: barn, 36x58, horse barns, 30x28 and 30x20, woodshed, 21x30, poultry house, 10x30. House and barns watered by wells; fields, by

springs and brook. Saratoga Lake, 1 mile distant. Occupied by owner. Reason for selling, other business. Price, \$8,000. Terms, cash. Address Fred Peck, owner, Wayville, N. Y., R. D. 1.

No. 438.—Farm of 114 acres; 7 miles from Saratoga Springs P. O., R. D. 1; 2 miles from railway station at Cedar Bluff on line of B. & M. R. R.; $\frac{1}{2}$ mile from school; 2 miles from churches and milk station; 4 miles from butter factory. Highways, good. Surface of farm, slopes a little south, well drained. Soil, clay and sand loam. Acres in meadow, 60; in timber, 13, variety; acres tillable, 100. Fruit, 70 apple, 11 pear, 16 cherry trees and some grapes. Adapted to hay, grain, fruit, etc. Fences, wire, board and rail, good condition. House, 2 stories, brick, 8 large rooms and hall, 4 small rooms; telephone in house. Outbuildings: 2 large basement barns, wagon house, poultry house, new iron roof on one barn last year, others painted, fair condition. Watered by well, spring and brook. Saratoga Lake, 2 miles from farm; Hudson River, 4 miles, and Adirondack Mountains, 12 miles distant. Occupied by tenant. Reason for selling, to close an estate. Price, \$6,500. Terms, \$3,500 cash, remainder on first mortgage, if desired. Address John W. Peck, owner, Fairport, N. Y.

No. 439.—Farm of 120 acres; located 3 miles from Schuylerville P. O., R. D. No. 1; 8 or 10 rods from railway station at Gates, on line of B. & M. R. R.; $1\frac{1}{4}$ miles from school; 3 miles from churches and $1\frac{1}{4}$ miles from butter factory. Highways, mostly state road. Nearest city, Saratoga Springs, population 13,792, 9 miles distant, reached by rail and highway. General surface of farm, rolling. Altitude, about 500 feet. Nature and quality of soil, sand loam, clay and slate. Acres that can be used as meadow, 40 or more; in natural pasture, 15 or more; in timber, 10, chestnut, pine, oak, hickory, etc. Acres tillable, 100. Fruit, small apple orchard, strawberries, raspberries and rhubarb. Adapted to clover, all grains and vegetables. Fences, mostly wire. 12-room house and 3 clothes-rooms and halls, good condition. Outbuildings: main barn, 30x66; sheep shed, 21x46; poultry house, 13x30; cow stable, 20x30; horse stable, 17x24; hog house, tool house, ice house and wagon house which is con-

nected with main barn and horse stable; also silo built two years ago. House piped from spring, barns from spring and fields by springs and brook. Hudson river, 3 miles distant. Occupied by owner. Reason for selling, old age. Price \$6,000. Terms, \$4,000 cash, balance on mortgage. Will sell stock and tools with farm. Address Orville Proper, owner, Schuylerville, N. Y.

No. 440.—Farm of 238 acres; 1 mile from Burgoyne, on line of B. & M. R. R.; 1 mile from school; 3 miles from church and butter factory; milk collected at door. Highways, state road. Nearest city, Saratoga Springs, population 13,792, $7\frac{1}{2}$ miles distant, reached by rail and highway. General surface, rolling. Altitude, 500 feet. Nature of soil, gravel, sandy loam, black muck and clay. Acres that can be used as meadow, 213; acres now used as meadow, 69; in timber, 20, pine, chestnut and hard wood. Acres tillable, 213. Fruit, 60 apple, 4 pear, 4 cherry and 12 plum trees. Adapted to corn, potatoes, oats and hay. Fences, mostly American wire and some rail. House, 2 stories 40x28, with wing 20x18 and wood house 18x16. Outbuildings: hog house 65x25, horse stable 35x22, dairy barn 75x22, grain barn 58x30, shed 70x14, wagon house and hay barn 55x25. Watered, house, barn and fields by springs. Occupied by owner. Reason for selling, a smaller place desired. Price, \$10,000. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address William T. Smith, owner, Saratoga Springs, N. Y., R. D. 1.

No. 441.—Farm of 40 acres; $\frac{1}{2}$ mile from Saratoga Springs; $\frac{3}{4}$ mile from railway station at Saratoga Springs on line of D. & H. and B. & M. R. Rs. $\frac{3}{4}$ mile from school and churches of all denominations. Highways, state road. Surface of farm, level. Soil, sandy loam. Acres in meadow, 2; acres tillable, 38. Best adapted to truck gardening. No fences. House, 10 rooms, steam heated, baths and toilets, excellent condition. Outbuildings: large barn, with basement, carriage house, green house plant, etc. Watered by city water. This place has been conducted as a hothouse and gardening plant for many years. There are 8 hothouses, averaging 100 feet in length, with a width of about 18 feet, double side benches with large center

|

FIG. 58.— BUILDINGS ON FARM NO. 435, TOWN OF SARATOGA, SARATOGA COUNTY.



bench. Houses are heated with hot water boilers. In connection with these hothouses, are 2 large, well constructed boiler houses, with complete outfit and general storage space. Over one of the boiler houses is a 3-room apartment finished off which may be used for help. About 12 good-sized hot beds, with sash to cover. About 5 acres in asparagus beds; 20 acres in rhubarb used for forcing in hot-houses in winter. This business has been running for about 20 years and a market has been established in New York, Albany, Troy, Schenectady and locally which uses all of the products at a good price. Occupied by owner. Reason for selling, death of former owner. Price, \$12,000. Terms, $\frac{1}{2}$ cash, first mortgage on balance. Address Etta C. Wells, owner, 184 Church street, Saratoga Springs, N. Y.

TOWN OF STILLWATER

Population 6,837

No. 442.—Farm of 130 acres; located $4\frac{1}{2}$ miles from Stillwater P. O., R. D. No. 1; 8 miles from Mechanicville, on

line of B. & M. R. R.; $1\frac{1}{4}$ miles from school and $2\frac{1}{4}$ miles from churches. Milk and cream collected at the door. Highways, state road. Nearest village, Mechanicville, population 8,208, 8 miles distant, reached by rail and highway. General surface, level and rolling. Nature of soil, clay loam. Acres that can be used as meadow, 80; in timber, 18, hemlock, oak, pine and poplar. Acres tillable, 112. Fruit, apple orchard of 8 acres, some pears, grapes, plums and cherries. Adapted to hay, rye, oats and corn. Fences, wire, board and rail, in fair condition. House, 13 rooms, in excellent condition. Outbuildings: large basement barn, with stable for horses and cattle, wagon house, corn crib, ice house, poultry house and hog house, all in good condition. Watered, house by sulphur well and cistern; barns by well and fields by well and running water. Occupied by owner. Reason for selling, ill health. Price, \$7,500. Terms, $\frac{1}{3}$ cash and remainder at 6%. Address S. A. Rogers, owner, Stillwater, N. Y.

SCHOHARIE COUNTY

Area, 647 square miles. Population, 23,005. Annual precipitation, 39 inches. Annual mean temperature, 48°. Number of farms, 3,288. County seat, Schoharie.

This county is located in the eastern part of the state and is intersected by the Schoharie Creek. It is also drained by the Charlotte River and the Catskill and Cobleskill creeks.

The surface is mostly hilly, the southern part being occupied by a range of highlands called the Helderbergs. This region is well timbered by oak, hickory, ash, sugar maple, elm and other trees. The soil in this section is a dark slate and gravelly loam. These hills decline and become less rugged toward the north and the dark slaty soil becomes more prevalent. In the northeastern part, clay loam is quite prominent. Between these hills lie the valleys of Schoharie, Cobleskill and Fox creeks, where the soil is a dark and yellow clay loam, deep and fertile. The county as a whole is adapted to pasturage, dairying and general farming. The county ranks second in hops and bees and sixth in the production of buckwheat. Some of the leading crops are: corn, 97,520 bushels; oats, 573,010 bushels; buckwheat, 240,770 bushels; rye, 34,207 bushels; potatoes, 307,346 bushels; hops, 2,156,883 pounds; hay and forage, 114,376 tons. The valuation of all farm property is \$14,454,132, a gain of 16 per cent. since the census of 1900. The average price of farm land per acre is \$14.36. The price of improved land including buildings is \$29.12. There are a large number of farms listed in this bulletin that can be bought for considerably less than the average of improved land. Domestic animals reported are dairy cows, 26,138; horses, 8,237; swine, 9,645; sheep, 11,422; poultry, 191,463; production of milk, 13,748,588 gallons with a value of \$1,418,629, including all dairy products. There are 30 milk stations and factories in the county.

The D. & H. railroad with a branch extending to Sharon Springs, a popular health resort, intersects the northern part of the county. The waters of this popular health resort are held in high repute for their medicinal value. A well equipped school of agriculture has been established at Cobleskill. The county has 1,202 miles of improved highways and 8 miles of state road. Excellent educational facilities are furnished by 179 district schools and the social and agricultural interests are conserved by 9 societies devoted to the interest of the farmer.

TOWN OF BROOME

Population 756

No. 443.— Farm of 180 acres; 9 miles from Middleburg P. O., R. D. 1, and railway station on line of M. & S. R. R.; $\frac{1}{2}$ mile from school; 1 mile from church; 2 miles from butter factory. Highways, good. Surface of farm, mostly level and rolling, some hilly. Soil, good, gravelly loam. Acres in meadow, 50; in natural pasture, 100; in timber, 30, mostly hard wood; acres tillable, 75. Fruit, 200 apple, 25 plum, 3 pear trees, black and red raspberries and currants. Best adapted to dairying. Fences, stone and wire, good condition. Two houses, 24x30, good condition. Outbuildings: barn, 48x40; barn, 30x36; barn, 20x55; hog pen, 20x24; 2 poultry houses, 10x14 and 10x40; new silo, good condition. Watered by running water. Occupied by owner. Reason for selling, ill health. Price, \$2,000. Terms, $\frac{1}{2}$ cash, balance on mortgage at 5%. Will rent. Address Charles S. Lloyd, owner, Middleburg, N. Y., R. D. 1.

TOWN OF COBLESKILL

Population 3,870

No. 444.— Farm of 96 acres; located $\frac{1}{2}$ mile from Howe Cave P. O., R. D. 1 and railway station, on line of D. & H. R. R.; 4 rods from school; $\frac{1}{8}$ mile from churches; 1 mile from milk station. Highways, stone road, in good condition. Nearest village, Cobleskill, population 2,362, 5 miles distant, reached by highway and rail. Surface of farm, rolling. Altitude, about 900 feet. Soil, dark loam, bottom land, gravel and sandy loam. Acres in meadow, 40; in pasture, 20; in timber, 10, consisting of hemlock, beech and maple. Acres tillable, 70. Fruit, plums, cherries, pears, apples, also hickory nuts. Adapted to corn, oats, wheat, rye and potatoes. Fences, stone wall, in good condition and wire. House, 3 barns and poultry house, all connected; ice house, wood shed, silo, tenant house and hog pen. House and milk house are supplied with running water; barns, by spring water; fields, by springs. Premises are situated in vicinity of Helderberg Mountains and Cobleskill River bounds farm on south. Occupied by owner and tenant. Reason for selling, old age. Price, \$8,000. Terms, $\frac{1}{2}$ down, balance on mortgage. Will rent. Address Conrad Rickard, owner, Howe Cave, N. Y.

TOWN OF CONESVILLE

Population 681

No. 445.— Farm of 120 acres, 1 mile from West Conesville P. O., R. D.; 6 miles from Grand Gorge railway station, on line of U. & D. R. R.; $\frac{1}{2}$ mile from school; 1 mile from churches; 3 miles from butter factory and milk station. Highways, somewhat hilly but good. Surface, rolling. Soil, clay loam. Acres in meadow, 50; natural pasture, 40; timber, 30, hardwood, some hemlock. Acres tillable, 30. Fruit, 4 pear, 10 plum, and 20 apple trees, also grapes, strawberries and currants. Best adapted to oats, barley, buckwheat and corn. Fences, wire, wall and rail, in good condition. House, upright, 30x20, with wing, 36x16. Outbuildings: barn, 50x30, with shed; pigsty, wagon house, 30x32, with horse stable and granary, all in good condition. Watered by well and springs. Occupied by owner. Price, \$1,800. Terms, $\frac{1}{2}$ cash, balance on bond and mortgage. Address David N. Patrie, owner, West Conesville, N. Y. Will rent.

TOWN OF FULTON

Population 1,350

No. 446.— Farm of 165 acres; 2 $\frac{1}{2}$ miles from post office; 9 miles from Richmondville, on line of D. & H. R. R.; $\frac{1}{4}$ mile from school; $\frac{3}{4}$ mile from Methodist church and milk station. Highways, somewhat hilly. Nearest village, Richmondville, population 567, reached by highway. Surface, a little rolling. Soil, gravel and limestone. Acres in meadow, 70; natural pasture, 60; timber, 30, oak, maple and beech, 800-tree sugar bush. Acres tillable, 135. Fruit, about 35 apple trees. Best adapted to potatoes, buckwheat, barley and oats. Fences, stone wall, fair condition. House, 1 $\frac{1}{2}$ stories, fair size, good condition. Outbuildings: quite a large barn, in fair condition; wagon house, pig pen. Watered by well and spring. Occupied by tenant. Reason for selling, other business. Price, \$1,200 cash or \$1,250 and take payment of \$600 down. Address John E. Wharton, owner, Summit, N. Y.

No. 447.— Farm of 266 acres; located $\frac{1}{2}$ mile from Fultonham P. O.; 4 miles from Middleburg, on line of M. & S. R. R.; $\frac{1}{2}$ mile from school and churches; 3 miles from butter factory and 4 miles from milk station. Highways, state road in construction. Nearest village,

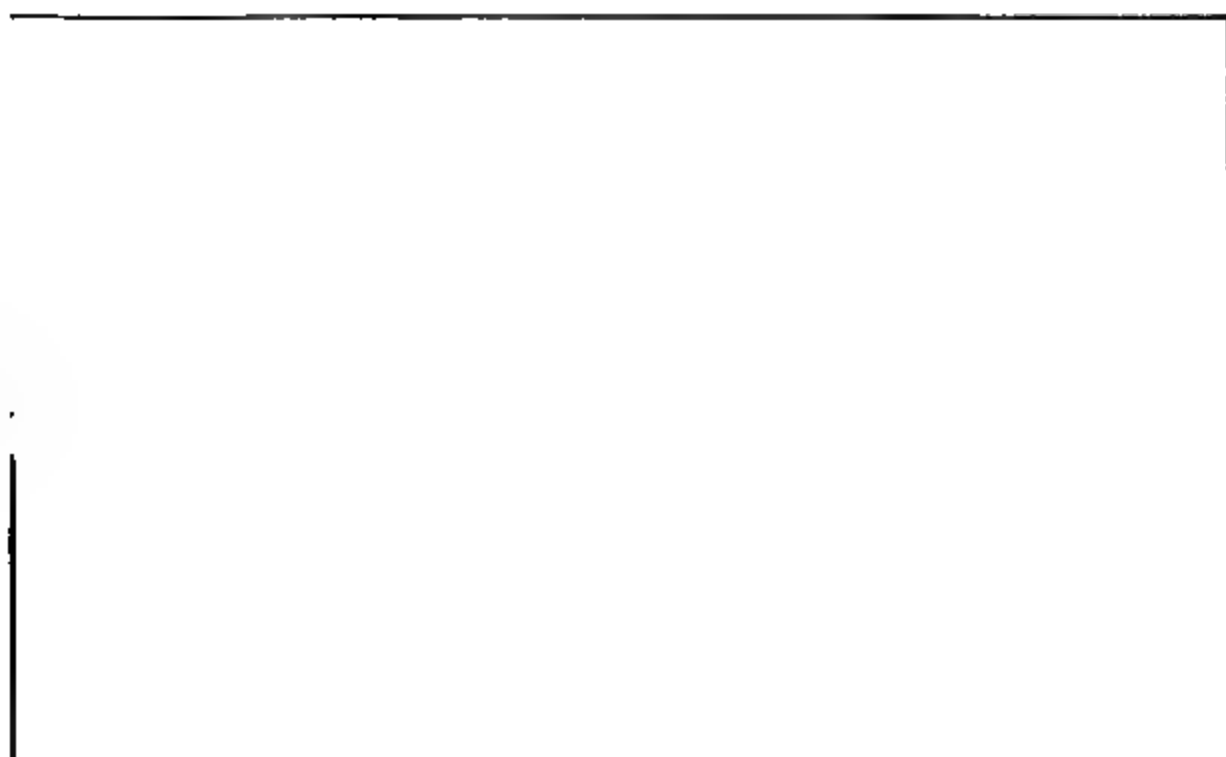


FIG. 59.— VIEWS ON FARM NO. 441, TOWN OF SARATOGA, SARATOGA
COUNTY.



Middleburg, population 1,059, 4 miles distant, reached by highway. General surface, rolling. Altitude, 300 feet. Nature of soil, rich loam. Acres that can be used as meadow, 125; in natural pasture, about 60; in timber, 75, oak, hemlock and pine. Acres tillable, 150. Fruit, 4 apple orchards, some cherries and pears. Adapted to corn, rye, wheat, oats and buckwheat. Fences, mostly wire, in fair condition. Two houses of 12 or more rooms, in good condition. Outbuildings, 2 large barns, wagon houses, silo, poultry houses and milk buildings, in good condition. Watered, house and barns, by running water; fields, by springs. Occupied by tenant. Reason for selling, to settle estate. Price, \$18,000, $\frac{1}{2}$ cash and remainder on mortgage. Address Mrs. Julia E. Haines, owner, 870 Lancaster street, Albany, N. Y. Owner will rent.

TOWN OF GILBOA

Population 1,420

No. 448.—Farm of 110 acres; $4\frac{1}{2}$ miles from Stamford P. O. and railway station on line of U. & D. R. R.; $\frac{1}{2}$ mile from school and church; $4\frac{1}{2}$ miles from butter factory. Highways, fairly good. Nearest village, Stamford, population 1,060, reached by highway. Surface, rolling. Acres in meadow, 30; natural pasture, 50; timber, 30, hardwood, some hemlock. Acres tillable, 50. Fruit, about 30 apple trees, few cherry trees. Adapted to oats, potatoes, buckwheat and rye. Fences, mainly stone wall, in fair condition. House, 26x36, wood house attached, fair condition. Barn, 30x40, stable attached, fair condition. Watered by springs. This would make a good dairy farm. Occupied by tenant. Price, \$1,600. Terms, part cash, balance on mortgage. Address Harriet E. Wheeler, owner, 136 Lancaster street, Albany, N. Y.

TOWN OF JEFFERSON

Population 1,181

No. 449.—Farm of 220 acres; $1\frac{1}{2}$ miles from Jefferson P. O.; 6 miles from Stamford, on line of U. & D. R. R.; $\frac{1}{2}$ mile from school; $1\frac{1}{2}$ miles from churches, butter factory and milk station. Highways, fairly good, near state road. Nearest village, Jefferson, population, 484. Surface, rolling and level. Soil, good loam. Acres in meadow, 50; natural pasture, 110; timber, 60, maple, beech and ash. Acres tillable, 100.

Fruit, apples. Adapted to hay, oats, potatoes, buckwheat and rye. Fences, stone and wire, fair condition. House, large, 2 stories, built for summer boarders. Outbuildings: barn, 60x46, recently built, basement cow stable attached to barn. Watered, house, by well; barns and fields, by springs. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$3,500. Terms, part cash, balance on time. Address Harriet E. Wheeler, owner, 136 Lancaster street, Albany, N. Y. Will rent.

No. 450.—Farm of 240 acres; $1\frac{1}{2}$ miles from Jefferson P. O.; 6 miles from railway station on U. & D. R. R.; $\frac{1}{2}$ mile from school, churches, butter factory and milk station. Highways, state road. Nearest village, Stamford, population, 1,060, reached by highway. Surface, rolling and level. Soil, good, gravelly loam. Acres in meadow, 60; natural pasture, 130; timber, 50, spruce and hemlock. Acres tillable, 120. Fruit, about 30 apple and a few pear trees. Adapted to hay, oats, potatoes, buckwheat and rye. Fences, stone. House, 9 rooms, good condition. Outbuildings: barn and cow stable, 46x60; hog pen; granary and horse barn, 26x36, good condition. Watered, house, by well; barns and fields, by springs. The spruce and hemlock standing on this farm put into timber would half pay for farm. Occupied by tenant. Price, \$3,500. Terms, small amount down, balance on mortgage. Address Harriet E. Wheeler, owner, 136 Lancaster street, Albany, N. Y. Will rent.

TOWN OF MIDDLEBURGH

Population 2,253

No. 451.—Farm of 160 acres; located 4 miles from Schoharie P. O. and railway station on line of M. & S. R. R.; $1\frac{1}{2}$ miles from school, 2 miles from churches; 4 miles from butter and cheese factory. Highways, good, some hilly. Population of Schoharie 1,124, reached by highway. Surface, mostly level, some rolling. Acres in meadow, 69; in pasture, 40; 6 acres in hops; in timber, 30, hardwood and pine. Acres tillable, 120. Fruit, apples, pears, peaches, etc. Adapted to dairying, sheep raising, grain, hops, etc. Fences, barbed wire, fine condition. House, 2 stories, fine condition. Tenant house, fine condition. Outbuildings: large barn and sheds, hop house, engine house, fine

condition. House and barns watered by pipe from springs. Occupied by owner. Reason for selling, wish to retire. Price, \$4,000. Terms on application. Address Frank Stevens, owner, Schoharie, N. Y.

No. 452.—Farm of 150 acres; located 3 miles from Middleburgh P. O., and railway station, on line of M. & S. R. R.; $\frac{1}{2}$ mile from school; 3 miles from churches and butter factory. Highways, good. Nature of soil, good. Acres that can be used as meadow, 50; in timber, 30, all kinds, hard and soft. Acres tillable, 120. Fruit, all kinds. Adapted to general crops. Fences, woven wire, board and stone, good. House, 16 rooms; 2 large halls, good condition. Outbuildings: 2 large barns, sheds, wagon house, poultry house, pig sty, milk house, all in good condition and painted. House watered by well, barns by well and fields by springs. Occupied by owner. Reason for selling, ill health. Price, \$5,600. Terms, \$3,000 cash, balance on mortgage with annual payments of \$200. Price includes all stock and tools. Address O. D. Borthwick, owner, Middleburgh, N. Y.

TOWN OF SCHOHARIE

Population 2,438

No. 453.—Farm of 167 acres; located 3 miles from Schoharie P. O., on line of Schoharie Valley R. R.; $1\frac{1}{4}$ miles from school; 3 miles from churches and $3\frac{1}{2}$ miles from milk station. Nature of highways, some level and some hilly. General surface, rolling. Nature of soil, limestone. Acres that can be used as meadow, all; now used as meadow, 25; in natural pasture, 12; in timber, 35, white oak, black oak and pine. Acres tillable, 125. Fruit, apples, pears and plums for family use. Adapted to rye, oats, corn, potatoes, hay and beans. Fences, in fair condition. House, 9 rooms, in fair condition. Outbuildings, barn 45x50, wagon house 24x40, hop house 28x45, in fair condition, and dairy barn 20x36. Watered, house, by well; barns, by stream, and fields by springs. Occupied by tenant. Reason for selling, old age. Price, \$3,700. Terms, agreeable. Address Martin D. Bailey, owner, Middleburgh, N. Y.

TOWN OF SEWARD

Population 1,380

No. 454.—Farm of 116 acres; located $\frac{1}{8}$ mile from Hyndsville P. O., R. D. No. 1, and railway station, on line of D. &

H. R. R.; $\frac{1}{8}$ mile from school, churches and milk station. Highways, good. Nearest village, Cobleskill, population, 2,362, 5 miles distant, reached by rail and highway. General surface, rolling. Altitude, 900 ft. Nature of soil, loam. Acres that can be used as meadow, 70; in natural pasture, 30; in timber, $16\frac{1}{2}$, beech, maple and hemlock. Acres tillable, 100. Fruit, 15 apple trees. Adapted to oats, corn, buckwheat, potatoes and rye. Fences, wire, in good condition. House, 30x30x25, 7 rooms, in good condition. Outbuildings, wagon house, 50x30x15, main barn 60x60x30, ice house, milk house, shop, hog house, poultry house 15x45 and silo 18x32, all in good condition. Watered, house by cistern and well; barns by reservoir and well; fields by natural stream. Occupied by owner. Reason for selling, ill health. Price, \$6,000. Terms, \$3,600 cash and remainder on mortgage. Address William Zulch, owner, Hyndsville, N. Y.

TOWN OF SHARON

Population 1,781

No. 455.—Farm of 98 acres; located $\frac{1}{2}$ mile from Sharon Springs P. O.; $\frac{1}{4}$ mile from railway station at Sharon Springs on line of D. & H. R. R.; $\frac{1}{4}$ mile from school; 1 block from Methodist church; $\frac{1}{2}$ mile each to Episcopal and Catholic churches; $\frac{1}{4}$ mile from butter factory and milk station. Highways, good. Surface of farm, level and slightly rolling. Altitude, 1,500 feet. Soil, black loam. Acres in meadow, 60; in natural pasture, 10; in timber, 10, consisting of maple and oak. Acres tillable, 88. Fruit, apples, pears, currants and berries. Adapted to hay, oats, buckwheat and rye. Houses were destroyed. Barn, fair condition. Watered: house and barn are supplied by village water; fields, by streams, springs or village water. Price, \$3,000. Terms, to suit purchaser. Sharon Springs is a noted summer resort and well patronized. Address Elizabeth S. Crannell, owner, 3 Hall place, Albany, N. Y. Will rent.

No. 456.—Farm of 20 acres; located at Sharon Springs, on line of D. & H. R. R.; $\frac{1}{4}$ mile from school and churches; 100 yards from butter factory, cheese factory and milk station. Highways, state road. General surface, level and rolling. Altitude, 1,200 feet. Nature of soil, loam. Acres that can be used as meadow, 15; in natural pasture, 5;

FIG. 60.—HOUSE ON FARM NO. 450, TOWN OF JEFFERSON, SCHOHARIE COUNTY.

FIG. 61.—HOUSE ON FARM NO. 448, TOWN OF GILBOA, SCHOHARIE COUNTY.



acres tillable, 20. Fruit, apples, plums, pears and cherries. Adapted to all crops, garden truck and hops. Fences, board. Eight-room house, good condition, bungalow style. Large barn, good condition. Watered, house by village reservoir. Occupied by tenant. Reason for selling, other business. Price, \$2,800. Terms, \$1,500 cash, balance on mortgage at 5%. Address George J. Best, owner, Albany, N. Y. Will rent.

No. 457.—Farm of 100 acres; located at Sharon Springs, on line of D. & H. R. R.; $\frac{1}{8}$ mile from school and churches. Highways, good. General surface, rolling and level. Altitude, 1,200 feet. Nature of soil, loam. Acres that can be used as meadow, all; in natural pasture, 25; in timber, 11, not included in 100, beech, maple and pine. Acres tillable, 100. Fruit, a few pear, cherry and plum trees. Adapted to hay, oats, alfalfa and hops. Fences, wire, in good condition. House, 8 rooms. Outbuildings, large barn, milk house, ice house, poultry house and hog house. Watered, house by well; barns and fields by springs. Occupied by tenant. Reason for selling, other business. Price, \$10,000. Terms, $\frac{1}{2}$ cash and remainder on mortgage at 5%. Address George J. Best, owner, Albany, N. Y., care of Internal Revenue.

No. 458.—Farm of 100 acres; located $1\frac{1}{2}$ miles from Sharon Springs station; $\frac{1}{2}$ mile from Leesville flag station, on line of D. & H. R. R.; $\frac{1}{2}$ mile from school and churches; $1\frac{1}{2}$ miles from butter factory and milk station; 1 mile from cheese factory. Highways, good. Nearest village, Sharon Springs, population 531, 2 miles distant, reached by rail and highway. General surface, approximately level. Altitude, 1,400 feet. Nature of soil, rich lime rock. Acres that can be used as meadow, about 35; in timber, about 12, beech and maple. Acres tillable, 88. Fruit, 100 apple, 75 plum, cherry trees and a few grapevines. Fences, wire, in good condition. House, 12 rooms. Outbuildings, large barn and silo. Watered, house, by well and cistern; barns, by running water. Occupied by tenant. Reason for selling, ill health. Price, \$5,000. Address C. W. Bronson, owner, Cherry Valley, N. Y.

TOWN OF WRIGHT

Population 926

No. 459.—Farm of 120 acres; 3 miles from Schoharie P. O., R. D. 1; 3 miles

from railroad station at Schoharie on line of M. & S. R. R.; $\frac{1}{2}$ mile from school; $1\frac{1}{4}$ miles from churches; $1\frac{1}{4}$ miles from butter factory; 3 miles from cheese factory and milk station. State roads and no hills. Nearest village, Schoharie, population 1,124, reached by highway. Surface, $\frac{1}{2}$ level, $\frac{1}{2}$ sloping to northeast. Altitude, about 700 feet. Soil, dark and yellow loam and lime; 36 acres in meadow; 20 acres in natural pasture; 30 acres in timber, hemlock, pine, beech, birch, oak, maple and red cedar. There are about 500 trees, quite large timber, and 200 sugar maples, large and medium size; 80 acres tillable. Fruit consists of 75 apple and a few plum, peach and cherry trees and grapes. Land best adapted to corn, oats, rye, hay and dairying. Stone, board and wire fences, in fair condition. 2-story frame house, 30x24, 9 rooms, in good condition, partly new, with large porch. Two adjoining barns, 36x48 and 30x60, 16 feet high; cow and horse stable in 1 barn; up-to-date poultry and hop house, 24x60. Watered, house by wells; barns by wells; fields by springs and creek. Fox's Creek on one line. Reason for selling, advanced age of owner. Price, \$4,600; part down. Will sell without timber for \$2,800. Address S. F. Taylor, owner, 306 Quail street, Albany, N. Y. Will rent with option to buy.

No. 460.—Farm of 216 acres; located 7 miles from Central Bridge; 3 miles from station at Delanson, on line of D. & H. R. R.; $\frac{1}{8}$ mile from school; $2\frac{3}{4}$ miles from churches and butter factory; 3 miles from milk station. Highways, state and country road, rather hilly. Nearest city, Schenectady, population 80,381, 15 miles distant, reached by rail and highway. General surface, rolling. Acres that can be used as meadow, about 150; in natural pasture, 30–35; in timber, 30–35, oak, pine and hemlock. Acres tillable, 150. Fruit, cherries, plums, pears for home use and about 75 apple trees. Adapted to rye, oats, barley, buckwheat and hay. Fences, stone and wire, in fair condition. House, 14 rooms, in good condition. Outbuildings, dairy barn for 30 head of stock and 6 horses; barn 25x60, hog house, ice house and smoke house. Watered, house by well and cistern; barns by pond and well; fields by pond and spring. Occupied by owner. Price, \$5,500. Terms, \$3,000 cash. Address David S. Johnston, owner, Central Bridge, N. Y.

SCHUYLER COUNTY

Area, 335 square miles. Population 13,954. Annual precipitation, 36.99 inches. Annual mean temperature, 48.4°. Number of farms, 1,920. County seat, Watkins.

The county is situated in the south central part of the state. The lower part of Seneca Lake extends into this county. The surface is undulated with gentle inclinations from each side to Seneca Lake and Kayuta Creek. Springs abound in every section of the county, furnishing an abundant supply of pure water, which finds its way to the lake through deep ravines which occur on either side along the shore. Near the lake, the soil is very fertile, sandy and gravelly loam predominating, while clay loam prevails in the rest of the county. Natural gas is found in large quantities. In this county are located the largest salt producing plants in the world. The leading crops are reported as follows: Corn, 134,500 bushels; oats, 291,237 bushels; wheat, 83,906 bushels; barley, 30,259 bushels; rye, 28,024 bushels; dry beans, 15,237 bushels; potatoes, 365,815 bushels; hay and forage, 44,344 tons. The total value of all farm property is \$9,263,801, an increase of 10 per cent. over the census of 1900. Domestic animals reported are dairy cows: 5,945; horses, 5,392; swine, 5,401; sheep, 22,982; poultry, 88,114; total production of milk, 3,222,190 gallons, which with the products of 5 milk stations and factories sold for \$174,342.

The county is intersected by the Northern Central, a part of the Pennsylvania system, and branches of the Lehigh Valley and New York Central railroads. In this county is located the famous Watkins Glen State Park, which is visited by thousands of people annually, because of its wonderful beauty and attractive features. There are 105 district schools in the county and Cook Academy, one of the famous preparatory schools of the state, is located near Watkins. The county has 573 miles of improved highway and 10 miles of state and county roads. Most of the products of the county are sold in local markets, but Buffalo, New York, and Philadelphia furnish unlimited markets for the products of the county. Schuyler county lies in the fruit belt of the state, where special attention is given to the cultivation of apples, pears, peaches, grapes and small fruits.

TOWN OF CATHARINE

Population 1,192

No. 461.—Farm of 110 acres; $4\frac{1}{4}$ miles from Alpine P. O., R. D. 2; 6 miles from railway station at Odessa on line of L. V. R. R.; $1\frac{1}{4}$ miles from school; 2 miles from churches; 6 miles from milk station. Highways, good. Nearest city, Ithaca, population, 16,750, 11 miles distant, reached by highway. Surface of farm, level and rolling. Soil, gravel and loam. Acres in meadow, 60; in natural pasture, 19; in timber, 30, hemlock, chestnut and hardwood. Acres tillable, 80. Fruit, 60 apple, 4 pear and 3 plum trees. Best adapted to buckwheat, oats, barley and wheat. Fences, mostly stump and rail, good condition. House, 6 rooms, good condition. Outbuildings: barn, 32x44, gambrel roof, good condition, shed attached, 24x50, gambrel roof; horse and carriage barn, 32x44, good condition. Watered, house by well; barn by running water; fields by stream. Reason for selling, owner wants to retire. Price, \$3,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address Lewis W. Ervay, owner, Odessa, N. Y.

No. 462.—Farm of 271 acres; located $3\frac{1}{2}$ miles from Alpine P. O., R. D. No. 2, and railway station, on line of Lehigh Valley R. R.; 1 mile from school; $3\frac{1}{2}$ miles from churches; milk collected at the door, and $3\frac{1}{2}$ miles from condensing plant. Highways, hilly. Nearest city, Ithaca, population 16,750, 5 miles distant, reached by rail and highway. General surface, mostly level. Altitude, 1,900 feet. Nature of soil, clay loam. Acres that can be used as meadow, 140; now used as meadow, 30; in natural pasture, 20; in timber, 111, pine, hemlock, beech, etc.; 20 acres of new seeding. Acres tillable, 160. Fruit, 50 apple and 10 cherry trees, some grapes. Adapted to hay, oats, potatoes and buckwheat. Fences, rail and wire. Seven-room house, good condition, new shingle roof. Outbuildings, barn 32x46 with basement; barn 32x34; poultry house 13x40. Watered, house by well, barns by well, and fields by spring and creek. Occupied by owner. Reason for selling, ill health of wife. Price, \$18 per acre. Terms, $\frac{1}{2}$ cash, balance on mortgage. Ideal place for sheep and cattle. Price includes a pair of horses, all farming tools. Address E. L. Cozier, owner, Alpine, N. Y., R. D. No. 2.

SHOWING THE "LAY OF THE LAND" IN EASTERN NEW YORK.

UN
K

TOWN OF HECTOR

Population 3,548

No. 463.—Farm of 60 acres; located 1 mile from post office, R. D.; 5 miles from railway station at Burdett on line of L. V. R. R.; 1 mile from school and church; 3 miles from milk station. Highways, in good condition. Altitude, 1,000 feet. Soil, gravelly loam. Acres in meadow, 10; in natural pasture, 10; in timber, 10, chestnut and oak. Acres tillable, 30. Fruit, 20 apple, 3 pear trees and some cherries. Adapted to oats, wheat, corn, potatoes, beans and buckwheat. Fences, rail and wire, poor condition. House, 10 rooms, good condition. Outbuildings: barn, 30x40, with straw shed attached; barn with basement, good condition. Watered, house by well; barn by spring; fields by spring. Reason for selling, ill health of owner. Price, \$1,500. Terms, cash. Address Leroy Welch, owner, Burdett, N. Y.

No. 464.—Farm of 100 acres; located 1 mile from Hector P. O., R. D. No. 1, and railway station, on line of L. V. R. R.; ¼ mile from school; 1½ miles from church and 3 miles from milk station. Highways, good. Nearest village, Watkins, population, 2,760, 7 miles distant, reached by rail and highway. General surface of farm, sloping. Altitude, 900 feet. Nature and quality of soil, clay loam. Acres in meadow, 30; in natural pasture, 4; in timber, 7, hickory, oak and maple; second growth. Acres tillable, 90. Fruit, 3,500 peach, 175 cherry, 50 plum, 20 pear and 20 apple trees, also 12 acres of grapes. Best adapted to fruit, hay and grain. Fences, wire, in fair condition. Two good sized houses, 1 large brick, 11 room house with slate roof, porch and blinds. Frame house of 10 rooms with wide porch. Outbuildings: basement barn 30x60, poultry house, ice house, fruit house and garage. House watered by well and cistern, barns by running water and fields by springs. Seneca Lake, which the farm borders for 40 rods, affords good fishing, boating, etc. Occupied by owner and tenant. Reason for selling, advanced age. Price, \$120 per acre. Terms, half cash, balance on mortgage at 5%. Address Eugene Erway, owner, Hector, N. Y.

TOWN OF MONTOUR

Population 1,676

No. 465.—Farm of 105 acres; located 2 miles from Montour Falls P. O. and

railway station on line of Northern Central R. R.; 1 mile from school; 2 miles from churches and milk station. Highways, somewhat hilly but good. Surface of farm, rolling. Soil, sand and loam. Acres in meadow, 20; in natural pasture, 8; in timber, 35, oak, hickory, walnut, pine, chestnut, basswood, etc. Acres tillable, 70. Fruit, apples, peaches, plums and grapes. Fences, wire and rail, poor condition. House, 24x32; wing, 15x24, 2 stories, 11 rooms, in good condition. Outbuildings: a good barn, 42x48; chicken coop, etc. Watered, house, by well; barns, by springs; fields, by springs. Reason for selling, other business. Price, \$3,500. Terms, \$500 cash, remainder on mortgage at 5%. Address Joseph A. Fitzpatrick, owner, 526 West Clinton street, Elmira, N. Y.

No. 466.—Farm of 80 acres; located 1 mile from P. O. and 1 mile from railway station at Montour Falls on line of Northern Central R. R.; ½ mile from trolley line; 1 mile from school; 1½ miles from churches and milk station; ¼ mile from butter factory. Highways, a little rolling. Surface of farm, comparatively level. Soil, gravelly. Acres tillable, 70. Fruit, cherries, plums, pears and apple orchards. Adapted to wheat, rye, oats, buckwheat, corn, and beans. Fences, mostly wire, fair condition. House, 2 stories, 9 rooms, good condition. Outbuildings: corn house, 14x25; barn, 30x50, good condition, and 2 sheds in fair condition. Watered, house and barn by well; fields, by springs. Occupied by tenant. Reason for selling, wish to retire. Price, \$4,000. Terms, \$2,000 down, balance on mortgage at 6%. Address Mrs. Alice Drake, owner, Montour Falls, N. Y. Will rent.

No. 467.—Farm of 113 acres; located 3½ miles from Montour Falls P. O., R. D. No. 2; 2 miles from railway station at Odessa, on line of L. V. R. R.; 1 mile from school and churches; 3 miles from butter factory and cheese factory and 2 miles from milk station. Highways, dirt and macadam roads. Surface of farm, rolling. Altitude, 1,285 feet. Nature of soil, clay loam and some black soil. Acres that can be used as meadow, 60; in natural pasture, 30; in timber 25, pine, hemlock, oak, chestnut and ash. Acres tillable, 80. Fruit, 100 apple, 20 pear, 15 plum and 8 cherry trees, also 20 grapevines. Best adapted to grain, beans and potatoes. Fences,

wire, board and rail. Large 10-room house, in fair condition. Basement barns 32x59 and 28x37. House watered by well; barns, by well, and fields, by spring. Occupied by tenant. Reason for selling, other business. Price, \$6,500. Terms, $\frac{1}{2}$ cash, balance on mortgage. Will rent only to sheep farmer on shares and will furnish the sheep. Address C. L. Frost, owner, Montour Falls, N. Y.

No. 468.—Farm of 80 acres; located $1\frac{1}{2}$ miles from Odessa P. O. and railway station, on line of L. V. R. R.; $\frac{1}{2}$ mile from school; $1\frac{1}{2}$ miles from churches, milk station and condensing plant. Highways, good. Nearest village, Watkins, population, 760, 5 miles distant, reached by rail and highway. General surface of farm, sloping. Nature and quality of soil, sandy and gravelly loam. Acres that can be used as meadow, 60; in natural pasture, 10; in timber, 5, beech, oak and chestnut. Acres tillable, 70. Fruit, 500 peach, 100 apple, 10 pear and 10 cherry trees. Best adapted to potatoes, beans, hay and corn. Fences, rail and wire, all new. Two-story house 20x30, new roof. Outbuildings: barn 40x50, leanto 30x60, half newly roofed; poultry house, new pig pen and corn crib. House watered by well, barns by well and springs and fields by springs. Occupied by tenant. Reason for selling, other business. Price, \$4,200. Terms, cash preferred, but will take \$3,000 cash, balance on mortgage. Will rent on shares. Address Louis Catlin, owner, Odessa, N. Y.

No. 469.—Farm of 71 acres; located $1\frac{1}{2}$ miles from Odessa P. O., R. D. No. 1 and railway station, on line of Lehigh Valley R. R.; $1\frac{1}{2}$ miles from school and churches; 4 miles from butter factory;

6 miles from cheese factory and $1\frac{1}{2}$ miles from condensing plant. Highways, dirt road. Nearest city, Elmira, population 40,093, 18 miles distant, reached by rail and highway. General surface, level, except pasture. Nature of soil, gravel and muck. Acres that can be used as meadow, 43; in natural pasture, 15; in timber, 4, for fuel. Acres tillable, 43. Fruit, 9 acres of apples, grapes and enough of other fruit for home use. Adapted to all kinds of crops. Fences, woven wire and rail. Twelve-room house, good condition, with large porch. Outbuildings, hay and granary, 32x36; carriage and horse barn, 36x40; shed, 30x60. Watered, house, by fine well and cistern; barns, by 2 wells, and fields, by spring. Occupied by owner. Reason for selling, other business. Price, \$4,800. Terms, \$2,700 cash, balance on mortgage. Address Alonzo D. Brisco, owner, Montour Falls, N. Y.

TOWN OF ORANGE.

Population 982

No. 470.—Farm of 188 $\frac{1}{2}$ acres; located $2\frac{1}{2}$ miles from Monterey P. O.; 9 miles from Beaver Dams, on line of N. Y. C. R. R.; 1 mile from school; 2 miles from church. Highways, good. General surface, rolling. Altitude, 1,400 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 135; in natural pasture, 40; in timber, 8 or 10. Acres tillable, 135. Fruit, 50 apple trees. Adapted to beans, buckwheat, corn and wheat. Fences, stump and rail. No house. Outbuildings, a good hog house but no barn. Watered, house, by springs, and barns, by creek. Operated by owner. Reason for selling, other business. Price, \$8 per acre. Terms, cash. Address D. W. Hagadorn, owner, Bradford, N. Y.

SENECA COUNTY

Area, 346 square miles. Population, 25,249. Annual precipitation, 39.55 inches. Annual mean temperature, 49.1°. Number of farms, 2,085. County seat, Waterloo.

This county lies in the central part of the state between Seneca and Cayuga Lakes.

The greater part of the surface is undulating and elevated. In the northern part the surface is level with the fertile sandy loam found in all sections of the "great level." The surface rises toward the south in gentle rolls to an elevation of about 800 feet in the extreme southern part. In the central portion of the county is found a dark loam with clay subsoil, while in the southern part, clay loam predominates. Gypsum and limestone are found in the county. The crop reports show: corn, 334,218 bushels; potatoes, 290,310 bushels; oats, 649,066 bushels; wheat, 331,822 bushels; buckwheat, 117,492 bushels; barley, 55,574 bushels; dry beans, 23,589 bushels; hay and forage, 59,724 tons. The total value of all farm property

FIG. 62.— HOUSES ON FARM NO. 464, TOWN OF HECTOR,
SCHUYLER COUNTY.



is \$14,589,014, being an increase of 32 per cent. over 1900. Domestic animals reported: Dairy cows, 7,429; horses, 7,879; swine, 9,832; sheep, 15,304; poultry, 128,791; production of milk, 3,607,915 gallons valued at \$224,120.

The N. Y. C. & H. R. R. R. and two branches of the Lehigh Valley railroad intersect the county. In the northern part of the county, an electric line passes through Seneca Falls. The Willard Insane Asylum with large and costly buildings is located at Ovid. Flour mills, malt houses and distilleries are located at Waterloo. The system of education is of the high character demanded by the state and the needs of the rural sections are fully met by 91 district schools conveniently located. The county has 31 miles of state and county roads and 413 miles of improved highways. The agricultural organizations consist of one Pomona grange, 11 subordinate granges, county agricultural society and county beekeepers society. Seneca county, like many other of New York counties, is famed for the beauty of its scenery.

TOWN OF FAYETTE

Population 2,640

No. 471.— Farm of 303 acres; located 6 miles from Geneva P. O., R. D.; $1\frac{1}{4}$ miles from railway station at Yale, on line of L. V. R. R.; $\frac{1}{2}$ mile from school; 3 miles from churches and $1\frac{1}{4}$ miles from milk station. Highways, good. Nearest city, Geneva, population 13,232, reached by rail, highway or water. Surface of farm, gentle slope to Seneca Lake. Altitude, 475 feet. Soil, dark gravel and clay loam. Acres that can be used as meadow, 200; in timber, 30, oak, walnut, maple, etc. Acres tillable, 200. Fruit, 17 acres Bartlett pears, 30 acres apples, 4 acres apricots, Kieffer pears, plums and peaches. Adapted to all crops. Fences, cedar posts and woven wire, in fine condition. Houses, fine colonial house 12 rooms, 2 first class farm houses, 2 good tenant houses. Outbuildings: main barn 30x70, with gambrel roof, cow barn 30x65, with stanchions for 34 cows, drinking basins, large silo, horse barn 30x40, carriage house, shop, poultry house, hog house, corn crib, ice house, etc. Watered, house by well, barns by spring, fields by lake and wells. Seneca Lake borders west side of farm. Price on application. Term, \$15,000 first payment, balance on mortgage at 5%. This place was originally three farms and can be subdivided and sold in sections. Address Miss M. T. Middlewood, owner, 10 Lafayette avenue, Geneva, N. Y.

No. 472.— Farm of 236 acres; located 1 mile from Kendaia, on line of L. V. R. R.; 1 mile from school, churches and milk station; 4 miles from butter factory. Highways, very good. Nearest city, Geneva, population 13,232, reached by rail and highway. General surface, slightly rolling. Nature of soil, black loam. Acres that can be used as

meadow, 200; in natural pasture, 36; in timber, 10, oak and hickory. Acres tillable, 200. Fruit, 2 acres of apples. Adapted to hay, wheat, oats, corn and alfalfa. Fences, fair. House, 11 rooms, in good condition. Outbuildings, large barn and tool house. Watered, house, by well; barns and fields, by spring. Occupied by tenant. Reason for selling, to settle an estate. Price, \$18,000. Terms, easy. Address E. A. Nordstrom, owner, Seneca Falls, N. Y. Will rent.

No. 473.— Farm of 200 acres; located 3 miles from Fayette; 6 miles from railway station at Romulus, on line of L. V. R. R.; $\frac{1}{2}$ mile from school; 1 mile from churches. Highways, 3 miles to state road. Nearest village, Seneca Falls, population, 7,018, 10 miles distant, reached by highway. General surface, slightly rolling. Nature of soil, clay loam. Acres that can be used as meadow, 20; in timber, 5. Acres tillable, 160. Fruit, 6 acres of apples. Adapted to alfalfa, wheat, corn, barley and oats. Fences, woven wire, in good condition. 2 complete sets of buildings, can be divided into two farms. Outbuildings, basement barn, nearly new, ice house, garage and four large barns. Watered, house and barns by well and windmill; fields, by spring. Farm borders on Cayuga Lake. Occupied by owner. Reason for selling, wish to retire. Price, \$18,000. Terms on application. Address E. A. Nordstrom, owner, Seneca Falls, N. Y.

TOWN OF LODI

Population 1,399

No. 474.— Farm of 206 acres; located 2 miles from Lodi, on line of L. V. R. R.; $\frac{1}{4}$ mile from school and 2 miles from churches. Nature of highways, state road. Nearest village, Lodi, 700

population, reached by rail and highway. General surface, level. Nature of soil, light clay loam. Acres that can be used as meadow, 198; in timber, 8. Acres tillable, 198. Fruit, 30 acres of peaches and 10 acres of cherries. Adapted to fruit and alfalfa. Fences, good. House, 10 rooms with steam heat and 2 bath rooms. Outbuildings, 3 barns. Watered, house and barns by running water. Price, \$30,000. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address F. R. Stevens, owner, Geneva, N. Y.

TOWN OF WATERLOO

Population 4,764

No. 475.—Farm of 167 acres; located 1 mile from Waterloo P. O., R. D. 3, and railway station on line of N. Y. C. R. R.; 1 mile from school and churches. Highways in good condition. Surface of farm, slightly rolling. Altitude, about 400 feet. Soil, sandy and sandy loam. Acres in meadow, 30; in natural pasture, 20; in timber, 10, little value. Acres tillable, 150. Fruit, old apple orchard of about 15 trees, young apple orchard of about 40 trees. Adapted to vegetables, oats, rye, corn, etc. Fences, mostly wire, good condition. House, 8 rooms, furnace and gas, good condition.

Outbuildings: horse and grain barn, 32x60; cow shed, 24x40; tool shed, 20x48; poultry house, 10x24, good condition. Watered by well and creek. Seneca River a few rods from farm. Occupied by tenant. Reason for selling, owner a widow. Price, \$75 per acre. Terms, cash or part cash. Address Mrs. Stella Harris, owner, Interlaken, N. Y.

No. 476.—Farm of 164 acres; located $2\frac{1}{2}$ miles from Waterloo P. O., R. D. 5, and railway station on line of N. Y. C. R. R.; 2 miles from school; $2\frac{1}{2}$ miles from churches. Highways, good. Surface of farm, slightly sloping. Altitude, 450 feet. Soil, dark loam and black muck. Acres in meadow, 80; in timber, 20, maple and elm. Acres tillable, 130. Fruit, apples and pears. Adapted to all crops grown in this climate. Fences, mostly wire, part good and part in fair condition. House, 10 rooms, good condition. Outbuildings: grain and hay barn, 35x60, new; also sheep barn, hog house, poultry house, cow shed, horse barn and carriage house. Watered by wells. Occupied by tenant. Price, \$10,000. Terms, mostly cash. Address Miss Susie E. Dowden, owner, Waterloo, N. Y.

STEUBEN COUNTY

Area, 1,490 square miles. Population, 83,363. Annual precipitation, 34.97 inches. Annual mean temperature, 49.1°. Number of farms, 7,363. County seat, Bath.

This county is situated in the southwestern part of the state bordering on Pennsylvania. It is drained by the Canisteo, Cohocton and Tioga Rivers, which unite in the southeastern part of the county and form the Chemung River. Cayuga Lake forms part of its northeast boundary.

The surface is an undulating table land diversified with broad irregular hills and deep valleys. A chain of low hills extends on both sides of the valleys of the Cohocton and Canisteo Rivers and extends across the county from the northeast to the southwest. Between these elevations is a wide fertile valley. The soil on the uplands is a deep gravelly loam, while clay loam is found in the valleys and in the eastern half of the county with a subsoil of clay and lime. In the southeast corner, a black loam soil is found in the valleys. Woodlands of oak, ash, pine, sugar maple, beech, chestnut and other trees cover nearly one-third of the entire area. Excellent building stone is found in the Devonian sandstone outcroppings. The county ranks first in the production of honey, second in buckwheat and fourth in sugar. Some of the principal crops are: corn, 228,411 bushels; oats, 1,216,138 bushels; wheat, 168,160 bushels; buckwheat, 341,264 bushels; rye, 71,102 bushels; potatoes, 3,279,953 bushels; hay and forage, 189,482 tons. The value of all farm property is \$37,369,643, an increase of 14 per cent. since 1900. The general advance in price of New York State farms is just beginning to reach this county and the next ten years will undoubtedly mark a very decided increase. Domestic animals are reported as: dairy cows, 37,559; horses, 20,506; swine, 17,740; sheep, 53,161; poultry, 296,172; production of milk, 16,430,763 gallons; this included with the products of 42 milk stations and factories in the county sold for \$1,325,568.

There are 45 miles of state and county roads and 2,862 miles of graded and improved roads, and 369 district schools with many standard high schools provide the means of education for the farmers' children. Several trunk lines intersect the

**FIG. 63.— MAIN HOUSE AND BARN ON FARM NO. 471, TOWN OF FAYETTE,
SENECA COUNTY.**



county, making the transportation facilities excellent and ample. The New York State Soldiers Home is located at Bath. Corning, known as the Crystal City, is the site of extensive glass works. Hornell is a leading railroad town where many important manufactories are located. There are 38 agricultural societies in the county serving the best interests of the farmer.

TOWN OF BATH

Population 8,172

No. 477.—Farm of 41½ acres; 3½ miles from Bath P. O. and railway station; 4½ miles from Savona railway station; ¾ mile from school. Soil, yellow loam and gravel. Acres in meadow, 29; in pasture, 7; in timber, 5½. House, 12x16, with wing, 8x12, in poor condition. Barn and addition, 20x30, with shed and stable. Watered by spring and cistern. Timber land comprises a fine thrifty grove of young white or cork pine; also from 5,000 to 8,000 feet of large sawing pine. Fences, pole and rail, in poor condition. Price, \$850. Terms, ¼ down, balance to suit purchaser. Owner will rent with option to buy. Name and address of owner, John H. Bowlby, Bath, N. Y.

No. 478.—Farm of 150 acres; located 2¼ miles from Bath P. O., R. D. 1, and railway station on line of D., L. & W. and Erie Railways; 1-20 of mile from school; 2 miles from milk station, and churches; 3½ miles from butter factory; 4 miles from cheese factory. Highways, state road. Surface of farm, level. Altitude, 1,000 feet. Soil, loam, gravel and muck. Acres in meadow, 50; in natural pasture, 40; in timber, 7, hemlock, pine, chestnut, etc. Acres tillable, 130. Fruit, apples. Adapted to wheat, rye, oats, barley, corn, tobacco, alfalfa and garden crops. House, 20x26, with wing, 18x24, and wing, 10x12, concrete porch, new; also tenant house. Outbuildings, barn, 30x62; barn, 20x44; barn, 14x20; silo, concrete stable, 26x34, new; barn, 38x70. Watered by well, windmill and two trout streams. Occupied by tenant. Reason for selling, owner in other business and cannot attend to farm. Price, \$13,750. Terms, ¼ cash, balance to suit purchaser. Address Mrs. Helene Bowlby, owner, Bath, N. Y.

No. 479.—Farm of 166 acres; located 4 miles from Kanona; 4½ miles from railway station at Bath, on line of Erie R. R.; school house on farm; 3 miles from churches; 4 miles from butter fac-

tory, milk station and condensing plant; cheese factory on farm. Highways, good. Nearest village, Bath, population 4,173, 4½ miles distant, reached by highway. General surface, rolling and level. Acres that can be used as meadow, 116; in natural pasture, about 25; in timber, about 25, beech, hemlock, maple and pine. Acres tillable, 116. Fruit, apples, plums, cherries and currants. Adapted to corn, wheat, oats, buckwheat and potatoes. Fences, wire and board, in fair condition. House, 28x28, 2 stories. Outbuildings, 2 barns 30x40 and 1 with basement and shed 15x40. Watered, house by spring and fields by springs. Occupied by owner. Reason for selling, ill health. Price, \$50 per acre. Terms, \$2,500 cash and remainder on time to suit purchaser. Address, Sterling Brooks, owner, Bath, N. Y.

TOWN OF BRADFORD

Population 629

No. 480.—Farm of 100 acres; located ¼ mile from Bradford P. O., R. D. No. 2; 7 miles from Hammondsport, on line of Erie and D., L. & W. R. Rs.; ¼ mile from school and churches; 2 miles from cheese factory; ¼ mile from milk station. Nearest large village, Bath, population 4,173, 12 miles distant, reached by rail or highway. General surface, rolling and level, sloping to southeast. Altitude, 1,100 feet. Nature of soil, clay loam. Acres in meadow, 40; in pasture, 10; in timber, 9, pine, oak, ash and maple. Acres tillable, 90. Fruit, 4 acres, 15-year-old apples, 150 young trees, small fruit for home use. Adapted to general farm crops and stock raising. Fences, rail and wire. House, 8 rooms and wood shed, newly painted, good condition. Outbuildings: barn, 30x60; wagon barn, 30x36, both with basement; corn house, 16x20; separator house, 6x8; small poultry house, all in fair condition. House watered by running water; barns, by running water; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms, \$3,000 cash, balance to suit purchaser. Address E. Curtis Switzer, owner, Bradford, N. Y.

TOWN OF COHOCTON

Population 3,103

No. 481.—Farm of 84 acres; located 6 miles from Cohocton, R. D. No. 3; 5 miles from Wallace, on line of D., L. & W. R. R.; 1 mile from school; $1\frac{1}{4}$ miles from churches; 6 miles from butter factory; 2 miles from cheese factory and 5 miles from milk station. Highways, hilly but usually good. Nearest city, Hornell, population 14,352, 14 miles distant, reached by highway. General surface, rolling. Altitude, 1,600 ft. Nature of soil, gray loam. Acres that can be used as meadow, 79; in timber, 5, beech, maple, basswood and ash. Acres tillable, 79. Fruit, a few pear, cherry and plum trees and currant bushes. Adapted to hay and grain. Fences, barbed and American wire, in fair condition. House, 10 rooms, in good condition. Outbuildings, main barn, 32x44, wagon house 16x20 and shed 12x16, all in fair condition. Watered, house and barns by well and fields by creek. Unoccupied. Reason for selling, ill health. Price, \$3,000. Terms, \$1,000 cash and \$100 per year and interest. Address Henry C. Crouch, owner, Cohocton, N. Y.

TOWN OF LINDLEY

Population 1,181

No. 482.—Farm of 307 acres; located $\frac{1}{2}$ mile from Lindley P. O., R. D. No. 2, and railway station on line of N. Y. C. R. R.; $\frac{1}{2}$ mile from school, churches and cheese factory; 2 miles from milk station and condensing plant. Nearest city, Corning, population 13,459, 12 miles distant, reached by rail or good highway. General surface of farm, 70 acres of good river flats, remainder, rolling. Altitude, 1,029 feet. Nature of soil, sandy loam. Acres in meadow, 45; in pasture, 200; in timber, 60, oak and pine, estimated at 200,000 feet. Acres

tillable, 150. Fruit, 10 apple trees. Adapted to tobacco, alfalfa, hay, corn, oats, potatoes and wheat. Fences, wire and board, in good condition. House, 12 rooms, fair condition. Outbuildings: 2 basement barns, 36x48; 2 tobacco sheds, 28x64; 1 horse barn, 32x32; 1 cow barn, 28x80; 1 corn crib, 24x32. House and barns watered by running water; fields, by creeks. Occupied by owner. Reason for selling, ill health. Price, \$9,000. Terms, \$2,000 cash, balance to suit purchaser. Address Alexander Brown, owner, Lindley, N. Y.

TOWN OF URBANA

Population 3,096

No. 483.—Farm of 100 acres; located 4 miles distant, reached by highway. railway station at Hammondsport, on line of B. & H. R. R.; 1 mile from school; 1 mile from creamery; 2 miles from churches and 9 miles from milk station. Highways, good. Nearest village, Hammondsport, population 1,560, 4 miles distant, reached by highway. General surface, slightly rolling. Altitude, 1,500 ft. Nature of soil, gravelly loam. Acres that can be used as meadow, 60; now in meadow, 40; in natural pasture 15; in timber, 15, second growth oak, maple and chestnut. Acres tillable, 75. Fruit, 40 apple and some plum trees. Adapted to wheat, corn, oats, barley and buckwheat. Fences, fair. House, 10 rooms, in fair condition. Outbuildings, barn 30x40 with shed attached, wagon barn 26x36, tool house 20x24, poultry house and hog house. Watered, house by well and cistern; barns by well and fields by springs. Unoccupied. Reason for selling, other business. Price \$2,800. Terms, $\frac{1}{2}$ cash and remainder on mortgage. Address Fred W. Locke, owner, Hammondsport, N. Y. Will rent.

SUFFOLK COUNTY

Area, 720 square miles. Population, 104,342. Annual precipitation, 60.2 inches. Annual mean temperature, 51.3°. Number of farms, 2,491. County seat, Riverhead.

This comprises the middle and eastern part of Long Island and is the extreme southeastern county of New York State. The waters of Long Island Sound border its north shore with the Atlantic Ocean on its southern side. The coast is deeply indented by inlets and bays, which afford good harbors.

The surface along the south shore is very flat and only about fifty feet above sea level. Extending across the county north and south from Smithtown Bay to Great South Bay, is a level valley averaging about four miles wide. These level tracts all have fertile, sandy loam soil. The northeastern portion rises in gentle slopes to about 300 feet above sea level and the soil is a clay and gravelly loam. From Smithtown Bay east along the north shore, is a ridge of hills extending to the extreme end of the county, while to the south it is parallel with a low broad upland, the soil being gravelly loam. Between these ridges is an interval of level

land, with fertile sandy loam. The surface is extensively covered with forests. There is, however, very little commercial timber to be found.

The leading crops are: corn, 743,721 bushels; oats, 61,257 bushels; wheat, 87,812 bushels; rye, 29,702 bushels; potatoes, 2,200,187 bushels; hay and forage, 22,011 tons. Because of the short distance from this county to New York City, much of the land is planted in garden truck and hundreds of farmers are engaged in this particular kind of farming. Along the south shore are found large duck and poultry farms, several of which market more than 100,000 ducks annually. Cranberries are also very extensively grown. The value of all farm property is \$33,537,021, an increase of 41.6 per cent. The average price of improved land is \$172.50, showing a gain of \$68.15 per acre over that shown by the census of 1900. This rise in value is largely caused by its proximity to New York City and by the rapid development of the poultry and vegetable business. Dairy cows reported, 5,996; horses, 6,347; swine, 9,945; sheep, 3,347; poultry, 305,844; production of milk, 2,794,136 gallons, total value of the same being \$276,676.

The county contains 129 district schools, has 57 miles of state and county roads and 1,462 miles of other improved highway. It is intersected by the Long Island and South Side railroads and electric lines in the extreme western part. The agricultural organizations comprise 3 granges, the Long Island potato exchange, farmers' agricultural association, a county agricultural society, a farmers' club and the Huntington Horticultural and Agricultural Society.

TOWN OF BROOKHAVEN

Population 19,591

No. 484.— Farm of 14 acres; located $\frac{1}{8}$ mile from East Setauket P. O.; $\frac{3}{8}$ mile from railway station at Setauket on line of L. I. R. R.; 1-16 mile from school; $\frac{1}{8}$ mile from churches; $\frac{3}{8}$ mile from milk station. Highways, gravel. Nearest village, Port Jefferson, $1\frac{3}{4}$ miles distant, reached by rail and highway. Surface of farm, rolling. Soil, loam. Acres in natural pasture, 2; 1 acre asparagus; in timber, 1, locust, hickory, etc. Acres tillable, 10. Fruit, 300 peach trees, apples, pears, etc. Best adapted to truck farming, flowers or poultry. Fences, wire, good. Two houses, 1 of 6 rooms, completely furnished, and 1 of 9 rooms, good condition. Outbuildings: barn, 20x30; poultry house, 15x50; corn crib, etc., all in good condition. Watered by springs; enough for irrigation. This farm is $1\frac{1}{2}$ miles from Long Island Sound; $\frac{1}{8}$ mile from Port Jefferson Bay; good bathing. Occupied by owner. Price, \$7,500, includes farm implements, horse, wagons, etc. Terms, part cash. Address C. W. Ryder, owner, East Setauket, L. I., N. Y.

TOWN OF SMITHTOWN

Population 4,988

No. 485.— Farm of 250 acres; located 2 miles from Hauppauge P. O.; 3 miles

from railway station at Smithtown on line of L. I. R. R.; 2 miles from school and churches. Surface of farm, rolling and level. Soil, gravel loam. Acres in natural pasture, 10; in timber, 180, chestnut, oak, cedar and locust. Acres tillable, 60. Fruit, 3,500 peach trees, also apples, plums, pears, quinces and cherries. Adapted to corn, potatoes, etc. House, 7 large rooms, open fireplace, fair condition. Outbuildings: barn, shed and poultry house. Occupied by tenant. Price, \$100 per acre. Terms, reasonable. Address Henry S. Mott, owner, Northport, L. I., N. Y. Will rent.

No. 486.— Farm of $116\frac{1}{2}$ acres; located 1 mile from Kings Park P. O. and $\frac{3}{4}$ mile from railway station, on line of Long Island R. R.; 1 mile from school and churches. Highways, state road. General surface, rolling. Altitude, 100 feet. Nature of soil, light loam. Acres that can be used as meadow, 40. Some timber, locust, chestnut and oak. Acres tillable, 40. Fruit, apples, pears and cherries. Adapted to all crops. Fences, new. 2 houses in good condition. Watered, house by spring and fields by springs. Address Edgar T. Smith, owner, Kings Park, N. Y.

SULLIVAN COUNTY

Area, 911 square miles. Population, 38,189. Annual precipitation, 37.6 inches. Annual mean temperature, 46.3°. Number of farms, 3,851. County seat, Monticello.

This county is located in the southeastern part of the state, is bordered on the south by Pennsylvania, on the west and southwest by the Delaware River, and is drained by the Mongaup, Neversink, Beaverkill and Shawangunk Rivers, Roundout Creek and two branches of Callicoon Creek.

The surface is hilly with a constantly increasing elevation from 1,000 feet in the southern part to 2,400 feet above tide water in the extreme north of the county. It is extensively covered with forests of ash, beech, birch, maple, chestnut, oak and pine. Red sandstone underlies a large part of the surface and bluestone is largely quarried and shipped for flagging, paving, etc. The soil in the north and central sections is largely a formation of red shale. In the southern half of the county, it is more rolling, and clay and gravelly loam well adapted for grain growing are found. As a whole the soil is quite productive and adapted to pasturage and general farming.

The county produced corn, 146,600 bushels; oats, 138,200 bushels; buckwheat, 96,033 bushels; rye, 23,532 bushels; potatoes, 259,461 bushels; hay and forage, 62,200 tons. Total value of all farm property is \$19,628,466, an increase of 57.4 per cent. in the last ten years. It is noted that even with this great gain the buildings in the county are still worth on an average \$7 per acre more than the land itself. We know of no other state where the land is still fertile as it is in this county in which this condition is found. Domestic animals reported are: dairy cows, 21,230; horses, 7,215; swine, 7,462; sheep, 6,558; poultry, 200,742; production of milk, 8,555,690 gallons, the total value of which was \$683,025.

The county is intersected by the N. Y., O. & W. railroad and by the Delaware & Hudson Canal. A branch of the Erie railroad extends from Port Jervis to Monticello. In the central part of the county among the highlands are located many excellent sanitariums and the benefit received seems to be equal to that afforded by the Adirondack regions. The climate is not nearly so cold as in the Adirondacks. The water is noted for its purity and clearness. There are 174 district schools in the county and an excellent academy is located at Monticello, with high and graded schools in the villages. The county contains 35 miles of state and county roads and 1,695 of other improved highways; 32 milk stations and factories are conveniently located in the county and its agricultural organizations consist of one county agricultural society, two granges, six Hebrew farmers' associations, a farmers' club and a farm and garden club.

TOWN OF COCHECTON

Population 1,141

No. 487.—Farm of 386 acres; 6 miles from the railroad station at Narrowsburg, on the Erie R. R. Post office, church, general store, school and blacksmith shop, within one block of the house. Acres tillable and in pasture, 200; balance, woodland, second growth white pine, hemlock, birch, beech, maple, about 100,000 feet of lumber, consisting chiefly of pine and hemlock, and about 300 cords of poplar. Fine trout stream running through property. About 300 yards east of house is an artificial lake, formed by a dam built across the Ten Mile River; this lake is well stocked with pickerel and has an area of about 25 acres; dam has heavy wall, 16 feet through, and faced with about 1 foot of concrete; affords good water power. On the west shore of lake is a beautiful pine grove, good hunting ground for small game such as rabbits and partridges. House, 15 rooms, good condition. Outbuildings: barn, 30x60, with concrete basement,

stable for horses and cattle; barn, 36x64, used for storing hay and grain; blacksmith shop and work shop, 24x40; wood and coal house, 16x100, with sleeping room above; poultry house, 16x171, with concrete floor. There is a spring on the hillside, with elevation enough to have running water in both house and barn. Reason for selling, death of owner's wife. Price, \$10,000. Owner will divide property and sell 344 acres, including barns, stream, lake and woodland, for \$6,000. Address R. B. Heinle, owner, Cochection Center, N. Y.

TOWN OF DELAWARE

Population 1,915

No. 488.—Farm of 50 acres; 6 miles from Callicoon P. O., R. D.; 1 mile from railway station on line of Erie R. R.; 1 mile from school; 2 miles from churches, butter factory, milk station and cheese factory. Highways, state road. Nearest village, Jeffersonville, population 400, 2 miles distant. Surface, rolling. Soil, good. Acres in

meadow, 15; natural pasture, 2; timber, 5. Acres tillable, 40. Fruit, about 80 apple trees, some pear trees, 15 grapevines. Adapted to oats, corn, potatoes, hay, etc. Fences, stone and wire, good condition. House, 31x80, 2½ stories, almost new. Outbuildings: barns, 30x40, 38x40, shed, 20x40, good condition. House and barns watered by wells; fields, by springs. Occupied by owner. Reason for selling, advanced age. Price, \$7,000, which includes household furniture and farm implements. Terms, 2-3 cash, balance on mortgage. Address Fred Justin, owner, Callicoon, N. Y., R. D. 1.

TOWN OF HIGHLAND

Population 1,043

No. 489.— Farm of 100 acres; located 1½ miles from Eldred P. O., 5¾ miles from Shohola, Pa., railway station, on line of Erie R. R.; 1½ miles from school and churches. Nearest city, Port Jervis, population 9,413, 18 miles distant, reached by rail or good highway. General surface, level. Altitude, 1,200 feet. Nature of soil, clay loam. Acres in meadow, 40; in timber, 60. Acres tillable, 40. Fruit, 75 apple trees. Best adapted to hay, grain and potatoes. Fences, stone and wire, fair condition. House, 24x32, with outside kitchen. Barn, 30x40, with lean-to, fair condition. House watered by well; barn by well and spring; fields by springs. Occupied by tenant. Price, \$2,000. Terms, part cash. Reason for selling, owner in other business. Address, John Love, owner, Eldred, N. Y. Will rent.

TOWN OF NEVERSINK

Population 1,861

No. 490.— Farm of 160 acres; 1¼ miles from Grahamville; ¾ miles from school and 1½ miles from churches. Good stock farm, fine location. Plenty of wood, consisting of about 1,000 sugar maple trees and a quantity of oak and chestnut. Sugar bush, equipped with evaporator for making maple sugar. Fine trout stream. House, 44x48, with wing, 24x26, in good repair, well painted. Large barns and all necessary outbuildings, nearly new. Watered by springs and brook. Well fenced. Farm is well

provided with machinery, new engine, ensilage elevator, 50-ton silo in barn, thresher and cleaner, wood saw and corn planter. Will be sold with or without machinery. Reason for selling, owner not able to work on farm, having only one hand. Price, \$3,000. Terms ½ cash, balance on mortgage. Thomas Barkley, owner, Grahamsville, N. Y.

No. 491.— Farm of 81 acres; located 1 mile from Neversink P. O.; 7 miles from railway station at Liberty on line of O. & W. R. R.; ¾ mile from school; 1 mile from church; 7 miles from butter factory and milk station. Highways, good condition. Nearest large village, Liberty, population 2,395, 7 miles distant, reached by highway. Surface of farm, slightly rolling; soil, red loam. Acres in meadow, 35; in natural pasture, 20; in timber, 26, beech, birch and maple. Acres tillable, 50. Fruit, apples, pears, plums and quinces, about 200 trees. Best adapted to oats, buckwheat and potatoes. Fences, barbed wire. House, 20 rooms, in good condition. Outbuildings: barn, 26x36, good condition; other necessary outbuildings. Watered, house and barns, by springs; fields, by brook. Occupied by owner. Reason for selling, advanced age. Price \$3,000. Terms, half down, balance on long time. Address Henry W. Dean, owner, Neversink, N. Y.

TOWN OF ROCKLAND

Population 3,803

No. 492.— Farm of 3 acres; located 4½ miles from Livingston Manor P. O. and railway station on line N. Y., O. & W. R. R.; 1 mile from school; 1¼ miles from church. Highways, good. Surface of farm, nearly level. Altitude, 1,800 feet. Acres that can be used as meadow, 2½. Fruit, 6 apple and 5 plum trees. Best adapted to hay and vegetables. Fences, wire, in good condition. House, 12 rooms, in good condition. Outbuildings: small barn, poultry house, wood house and laundry. House watered by artesian well. Lake Waneta on border of farm. Occupied by owner. Reason for selling, ill health. Price and terms on application. Address Mrs. M. Gilmour, owner, Livingston Manor, N. Y.

TIOGA COUNTY

Area, 498 square miles. Population, 25,549. Annual precipitation, 47.11 inches. Annual mean temperature, 49.3° Number of farms, 2,844. County seat, Owego.

This county is located in the southern tier of counties in about the center of the state and borders on Pennsylvania. It is intersected by the Susquehanna River. It is also drained by the Owego, Tatatonk and Pipe Creeks.

The surface is finely diversified by broad, verdant hills and valleys, some of which are quite deep. Woodlands of ash, beech, elm, hickory, oak and sugar maple and other trees cover nearly one-third of the county. The soil of the valleys is largely a deep gravelly loam, rich and fertile; that of the hills, in the western section is a clay and gravelly loam. In the north, black loam is much in evidence, while south of the Susquehanna River, shale and clay loam predominates. The soil is well adapted to general farming and pasturage. The leading crops are: corn, 141,680 bushels; oats, 353,398 bushels; wheat, 20,924 bushels; buckwheat, 278,328 bushels; rye, 21,591 bushels; potatoes, 729,523 bushels; hay and forage, 80,889 tons. The value of all farm property is \$11,085,589, a gain of 12.6 per cent. since 1900. The average price of farm lands is \$14.29 per acre, but the average price of improved land is \$27.78. The total production of milk is 9,595,120 gallons; total receipts from the sale of dairy products, \$841,126.

The county is intersected by the Erie railroad, D., L. & W. main line and branch running north from Owego, and by three branches of the Lehigh Valley railroad. The local markets which may be found in Owego, Elmira, Ithaca and Binghamton are ample for all the products of the county and lie within a very short shipping distance. Buffalo, New York and Philadelphia furnish unlimited markets for those who wish to avail themselves of them.

There are 148 district schools in the county, several standard high schools and a free public academy located at Owego. There is a total of 1,067 miles of highway in the county, only 83 of which are not improved. The agricultural organizations established to conserve agricultural interest consist of a Pomona grange and two subordinate granges, two agricultural societies and two poultry associations.

TOWN OF BARTON

Population 6,682

No. 493.—Farm of 110 acres; located $\frac{3}{4}$ mile from Waverly P. O., R. D. 1, and railway station, on line of D., L. & W., Erie, and Lehigh Valley R. Rs.; $\frac{1}{2}$ mile from school and churches; $\frac{3}{4}$ mile from butter factory and milk station. Highways, hilly but good. Nearest large village, Waverly, population, 5,119, $\frac{3}{4}$ mile distant, reached by highway. Surface rolling. Soil, clay subsoil. Acres in meadow, 42; in natural pasture, 25; in timber, 12, pine, oak, etc. Acres tillable, 98. Fruit, 5 apple, 8 cherry, 7 plum, 6 pear and 2 peach trees. Adapted to corn, oats, potatoes, buckwheat, wheat, etc. Fences, barbed wire, in good condition. House, brick, 10 rooms, in good condition. Outbuildings: horse barn, 28x32, in good condition; shed, 32 feet long; barn, 30x40, in fair condition; wagon house, 16x32; woodshed, poultry house, in good condition. Watered, house, by spring and well; barns, by spring; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$6,000. Terms, \$3,000 cash, balance on time. Address J. E. Walker, owner, Waverly, N. Y., R. D. 1. Will rent.

TOWN OF CANDOR

Population 2,896

No. 495.—Farm of 70 acres; located 4 miles from Newark Valley P. O.; 3 miles from Flemingville, on line of L. V.

R. R.; $\frac{1}{2}$ mile from school and churches; 4 miles from cheese factory and condensing plant; 3 miles from milk station. Highways, some level and some hilly. Nearest village, Owego, population 4,570, 8 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, 50; in natural pasture, 6; in timber, 12, beech, chestnut, oak, ash and maple. Fruit, apple and a few young peach trees. Adapted to oats, hay, buckwheat, rye, wheat, potatoes and corn. Fences, wire, rail and stone, in fair condition. House, 12 rooms. Outbuildings, barn 30x40 with shed 20x40, stable, silo, wagon house 30x40 with stable for horses, also poultry house and hog house. Watered, house by well; barns, by well and creek; fields, by spring and creek. Occupied by owner. Reason for selling, advanced age. Price, \$4,500. Terms, $\frac{1}{2}$ cash and remainder to suit purchaser. Address, Dana H. Andrews, owner, Newark Valley, N. Y.

No. 496.—Farm of 138 acres; located 6 miles from Candor P. O., R. D. No. 1; 2 miles from railway station at West Candor, on line of Lehigh Valley R. R.; $\frac{1}{2}$ mile from school; 2 miles from churches and milk station and 6 miles from condensing plant. Highways, good. Nearest village, Owego, population 4,570, reached by rail or highway. General surface, level and rolling. Altitude, 800

FIG. 64.—VIEW ON FARM NO. 492, TOWN OF ROCKLAND, SULLIVAN COUNTY.

FIG. 65.—HOUSE ON FARM NO. 494, TOWN OF BARTON, TIoga COUNTY.



feet. Nature of soil, loam with some stones. Acres that can be used as meadow, 100; in natural pasture, 25; in timber, 10, mostly hard wood. Acres tillable, nearly all. Fruit, apples, pears and cherries. Adapted to hay, potatoes, oats, rye, buckwheat, etc. Fences, woven wire and some barbed wire, good condition. Ten-room house, upright, 18x24, wing, 16x32; new roof, good condition. Outbuildings, barns, 30x44, with basement; 30x42, with basement and 20x30, with basement; new silo, 12x22. Watered house by well and cistern, barns, by springs and fields by springs. Occupied by tenant. Reason for selling, old age. Price \$23 per acre. Terms, \$1,500 cash, balance on mortgage. Address, La Fayette Crum, owner, 212 Linden Ave., Ithaca, N. Y.

No. 497.—Farm of 52 acres; located 5 miles from Candor P. O., R. D. No. 3; 2½ miles from railway station at Catatonk, on line of D. & H. R. R.; ¾ mile from school; ¾ mile from church; 5 miles from butter factory and 2 miles from milk station. Highways, sloping, good. Nearest village, Owego, population 4,570, 5½ miles distant, reached by rail or highway. General surface, rolling, with some level fields. Nature of soil, clay loam. Acres that can be used as meadow, 47; now used as meadow, 13; in natural pasture, 10; in timber, 5, pine, oak, chestnut, good. Acres tillable, 47. Fruit, 17 apple, 14 plum, 40 peach, 7 cherry, 3 pear trees, all bearing. Adapted to corn, potatoes, oats, wheat, rye and hay. Fences, wire, rail and stone wall, fair condition. House, 30x28, 7 rooms, with 16x20 store room and wood shed, fair condition. Outbuildings, barn 30x40, with basement; wagon barn, 28x20; granary, 16x12; 3 poultry houses, fair condition. Watered, house, by well; barns, by well and fields, by springs. Occupied by owner. Reason for selling, old age and ill health. Price \$1,800. Terms, ½ cash, balance on mortgage. Address D. D. Burchard, owner, Candor, N. Y., R. D. 3.

No. 498.—Farm of 44 acres; located 1¼ miles from Candor P. O., on line of D. L. & W. R. R.; ¼ mile from school 1½ miles from churches and milk station. Nature of highways, dirt road. Nearest village, Owego, population 4,570, 10 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, loam. Acres used as mea-

dow, 29; in natural pasture, 5; in timber, 10, oak, beech, maple and chestnut. Acres tillable, 32. Fruit, 25 apple, 11 cherry, 1 pear, 4 plum trees, 2 grape vines and currants. Adapted to corn, oats, buckwheat, potatoes, rye, hay and beans. Fences, rail and woven wire, in fair condition. House, 20x36, woodshed 11x23, in fair condition, barn 28x32, new poultry house 12x30. Watered, house by well; barns, by springs; and fields, by springs and creek. Reason for selling, other business. Price, \$1,000. Terms, \$400 cash and remainder on mortgage at 5%. Address Clarence E. Wright, owner, Candor, N. Y.

No. 499.—Farm of 97 acres; located 5½ miles from Candor P. O. R. D. No. 3; 3 miles from railway station at Catatonk, on line of D. L. & W. R. R.; less than 25 rods from school and church; 6 miles from butter factory and 2½ miles from milk station. Highways, good. Nearest village, Owego, population 4,570, 6 miles distant, reached by rail and highway. General surface, rolling, with some level fields. Nature of soil, clay loam. Acres that can be used as meadow, 93; now used as meadow, 45; in natural pasture 15; in timber, 4, pine, oak and chestnut, good. Acres tillable, 93. Fruit, 20 apple, 4 cherry trees and currants. Adapted to corn, potatoes, oats, wheat, rye and hay. Fences, mostly wire, some rail. House, 30x30, good, well roofed. Outbuildings, barn, 30x40, large shed, 16x20, with loft, fair condition, all well roofed. Watered, house by well; barns, by springs; and fields, by springs and brook. Reason for selling, old age. Price, \$2,800. Terms, ½ cash, balance on mortgage. Address Celestia A. Burchard, owner, Candor, N. Y., R. D. 3.

No. 500.—Farm of 93 acres; located 2½ miles from Straits Corners P. O., R. D. 1; 3 miles from railway station at West Candor, on line of Lehigh Valley R. R.; 1 mile from school and churches, butter factory and milk station; 7 miles from condensing plant. Highways, good. Nearest large village, Owego, population 4,570, 10 miles distant, reached by rail and highway. Surface of farm, half level, balance rolling and some side hill. Soil, 20 acres gravel, balance loam. Acres in meadow, 25; in natural pasture 25; in timber, 15, hemlock, cherry, ash, beech, etc. Acres tillable, 70. Fruit, 50 apple, 1 pear, 3 peach, 1 crab apple,

1 plum and 4 cherry trees. Adapted to buckwheat, oats, corn, potatoes, wheat and hay. Fences, mostly wire, in fair condition. House, 10 rooms, in good condition. Outbuildings: basement barn 36x56; shed attached, 20x40; wagon house attached, 26x35; poultry house, tool house and hog house. Watered, house, by running water; barns, by running water; fields, by creek and springs. Occupied by tenant. Reason for selling, other business. Price, \$2,200. Terms, \$1,000 down, balance on bond and mortgage at 5%, easy payments. Address Walter E. Elmendorf, owner, Candor, N. Y.

TOWN OF NEWARK VALLEY

Population 1,975

No. 501.—Farm of 100 acres; located 3 miles from Newark Valley P. O., R. D. 2; 3 miles from railway station at Flemington on line of L. V. R. R.; $\frac{1}{2}$ mile from school, churches, butter factory and milk station. Highways, good. Nearest large village, Owego, population 4,570, 8 miles distant, reached by highway. Surface of farm, 40 acres hilly, 60 acres rolling and level. Soil, clay. Acres in meadow, 60; in natural pasture, 25; in timber, 2, small oak, pine and hemlock. Acres tillable, 80. Fruit, apples, pears, plums and cherries, also 4 grapevines. Best adapted to potatoes, buckwheat, corn and oats. Fences, about $\frac{1}{2}$ woven wire, balance board, good condition. House, 40x60, 9 rooms, good condition. Outbuildings: horse barn, 30x60; barn, 36x40; cow barn, 36x60; sheep shed, 16x20; tool shed, 20x40; poultry house, 12x20, and ice house, 10x10. All buildings newly painted. Watered, house by running water; barn by pump; fields by springs. Occupied by owner. Reason for selling, other business. Price, \$3,800, includes stock and all tools. Terms, \$1,800 cash, balance on mortgage. Address A. F. Barrott, owner, 574 Main street, Owego, N. Y.

No. 502.—Farm of 135 acres; located 3 miles from Newark Valley P. O., R. D. No. 1 and railway station, on line of Lehigh Valley R. R.; 1 mile from school and churches and 3 miles from butter factory, milk station and condensing plant. Highways, good. Nearest city, Binghamton, population 53,668, 15 miles distant, reached by rail or highway. General surface, good. Nature of soil,

clay subsoil. Acres that can be used as meadow, 75; now used as meadow, 40; in natural pasture, 25; in timber, 15, hard wood. Acres tillable, 100. Fruit, 50 grafted apple trees and 30 cherry trees. Adapted to hay, oats, buckwheat, potatoes and corn. Fences, wire, good condition. House, 11 rooms, good. 2 barns, 36x40, good condition. Watered, house and barns by spring. Occupied by owner. Reason for selling, old age. Price, \$30 per acre. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address Manier Zimmer, owner, Newark Valley, N. Y.

No. 503.—Farm of 104 acres; located $2\frac{1}{2}$ miles from Berkshire P. O., R. D. 3; 3 miles from railway station at Newark Valley, on line of Lehigh Valley R. R.; 3 miles from high school; $\frac{1}{2}$ mile from school; $2\frac{1}{2}$ miles from churches, and two condensing plants. Highways, state road. General surface, level and rolling. Altitude, 900 feet. Nature of soil, loam. Acres in meadow, 60; in natural pasture, 34; in timber, 10, chestnut, ash, beech and maple. Acres tillable, 60. Fruit, 10 apple and 10 pear trees, young strawberries and bush berries for home use. Adapted to potatoes, corn and general farm products. Fences, wire, in fine condition. House, large, 11 rooms, besides closets and halls; heated by furnace. Outbuildings: barn 30x40, with stable 26x45 attached; horse barn 26x40, with addition 12x40; granary 16x24, and garage 12x20. House and barns watered by well; fields, by spring and creek. East branch of Owego creek runs through farm. Occupied by tenant. Reason for selling, owner wants smaller farm. Would take small farm or village home in part payment. Price, \$60 per acre. Terms, half cash, balance to suit purchaser. Address W. N. Rice, owner, Newark Valley, N. Y.

TOWN OF OWEGO

Population 7,466

No. 504.—Farm of 200 acres; located 6 miles from Owego P. O., R. D. 1 and railway station on line of Erie and D., L. & W. R. Rs.; 4 miles from Newark Valley station on line of Lehigh Valley R. R.; $\frac{1}{2}$ mile from school and church; 4 miles from butter factory; and 3 miles from condensing plant. Highway, state road. General surface, rolling, some level. Nature of soil, mostly loam and shale. Acres in meadow,

about 100; in natural pasture, 20; in timber, 20, pine, chestnut, hemlock and hardwood. Acres tillable, 150 or more. Fruit, apples, pears, plums, peaches and cherries. Adapted to hay, oats, corn, buckwheat, potatoes and rye. Fences, wire, in good condition. House, 11 rooms, in good condition. Outbuildings: barn, 50x78, shed, 30x80, all in good condition. House and barns watered by well; fields, by spring. Occupied by tenant. Reason for selling, ill health. Price, \$7,000. Terms, \$3,000 cash and remainder on easy terms. Address Philip H. Schoolcraft, owner, 399 Main street, Owego, N. Y.

No. 505.—Farm of 60 acres; located 2 miles from Apalachin P. O. and railway station on line of D., L. & W. R. R.; $\frac{1}{2}$ mile from school; 2 miles from churches and milk station and 4 miles from butter factory. Highways, good. Nearest large village, Owego, population 4,570, 8 miles distant, reached by rail and highway. Surface of farm, practically level. Soil, sandy loam. Acres in meadow, 55; in timber, 5, pine, hemlock and beech. Acres tillable, 55. Fruit, apples, cherries and grapes. Adapted to corn, potatoes, oats, wheat and rye. Fences, principally American wire. House, 10 rooms, newly painted, good condition, slate roof, concrete walks. Outbuildings: barn, 80x28; barn, 26x30; grain house, wagon house, storehouse, etc. Watered by well and springs. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms, \$3,000 down, balance on time. Address George J. Sherwood, owner, Apalachin, N. Y.

No. 506.—Farm of 45 acres; 1 mile south of Apalachin P. O. and railway station on line of D., L. & W. R. R.; $\frac{1}{2}$ mile from school; 1 mile from churches and milk station; 2 miles from butter and cheese factory. Highways, state road. Nearest large village, Owego, population 4,570, 6 miles distant, reached by rail and highway. Surface, level and rolling. Soil, clay loam. Acres in meadow, 43; natural pasture, 1; timber, 1, oak and chestnut. Acres tillable, 43. Fruit, 100 apple trees, 50 sour and sweet cherry trees, pears, plums, peaches and grapes. Adapted to fruits, potatoes and other crops, but especially fruits. Fences, woven wire and rail. House, 16x24, with a 16x20 addition, good cellar, first-class condition. Outbuildings: barn, 28x38; barn, 16x28;

barn, 20x30, with basements, in good condition; barns have new roofs; also new carpenter and blacksmith shops. Watered, house and barns by well; fields, by springs. Forest Lake 20 rods from back end of farm. Occupied by owner. Reason for selling, ill health of owner. Price, \$2,500. Terms, \$1,000 cash, balance on time. Address Wm. W. Jewett, owner, Apalachin, N. Y.

No. 507.—Farm of 66 acres; located 2 miles from Owego P. O., R. D. No. 2 and railway station, on line of Erie, D. L. & W. and Lehigh Valley R. Rs.; 1 mile from school; 2 miles from churches and 2 miles from milk station. Highways, good. Nearest village, Owego, population 4,570, 2 miles distant, reached by rail and highway. General surface, rolling and level. Nature of soil, sandy loam. Acres that can be used as meadow, 60; now used as meadow, 20; in natural pasture, 12. Acres tillable, 60. Fruit, 30 apple, 6 peach, 10 pear, 10 cherry, 6 plum trees, 6 grape vines, $\frac{1}{4}$ acre of strawberries and red raspberries. Adapted to potatoes, corn, oats, wheat and hay. Fences, mostly wire, good. 7 room house, good, fine cellar and furnace. Outbuildings, barn, 24x34; barn, 30x40; barn, 14x50; new poultry house; good granary, 18x24. Watered, house by well and cistern; barns, by well; fields, by spring. Susquehanna river, 20 rods distant, fine bathing and fishing. Occupied by owner. Reason for selling, ill health. Price, \$5,500. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address M. V. Zimmer, owner, Owego, N. Y., R. D. No. 2.

No. 508.—Farm of 40 acres; located 4 miles from Owego P. O., R. D. No. 2; 1 mile from railway station at Hiawatha, on line of Erie R. R.; 1 mile from school, and church, 4 miles from butter factory; 2 miles from milk station and 4 miles from condensing plant. Highways, good and level. General surface of farm, rolling and level. Nature of soil, loam. Acres that can be used as meadow, 20; in natural pasture, 5; in timber, 4, pine, hemlock, oak and chestnut. Acres tillable, 30. Fruit, 15 apple, 2 pear, 15 cherry and 6 plum trees. Adapted to wheat, rye, oats, potatoes, buckwheat and corn. Fences, wire and stone walls. House, 7 rooms, 20x40, in good condition. Outbuildings: barn 35x40, granary, 3 poultry houses, etc. Water piped to house, barns watered by spring

and fields by springs. The Susquehanna River borders on this farm. Occupied by owner. Reason for selling, other business. Price, \$1,800. Terms, \$800 cash, balance on mortgage at 5%. Owner will sell cows, team, tools and crops, or farm alone to suit buyer. Address C. Kreutzfeldt, owner, Owego, N. Y., R. D. No. 2.

TOWN OF SPENCER

Population 1,205

No. 509.—Farm of 80 acres; located 4 miles from Spencer P. O., R. D. No. 2 and railway station, on line of L. V. R. R.; $\frac{1}{4}$ mile from school; 3 and 4 miles from churches; 4 miles from butter factory and milk station and condensing plant. Highways, state road. Surface of farm, hilly, rolling and level. Soil, loam. Acres that can be used as meadow, 20 or more; in natural pasture, 25; in timber, 5, hardwood and some hemlock. Acres tillable, 70. Fruit, apples, pears, cherries and plums. Adapted to oats, buckwheat, corn, rye, potatoes, etc. Fences, rail and board. House, 10 rooms, in good condition. Outbuildings: wagon barn, 24x30; hay barn, 30x40; barn, 32x40; store house, pig pen, cowstable 16x30, in good condition. House, watered by well; barns, by creek; and fields by spring and creek. Occupied by owner. Reason for selling, to settle estate. Price, \$2,200. Terms cash. Address Olive Ferris, owner, Halsey Valley, N. Y.

No. 510.—Farm of 824 acres; located 3 miles from Spencer P. O., R. D., and railway station on line of L. V. R. R.; $\frac{1}{4}$ mile from school; 3 miles from churches, milk station and condensing plant. Highways, good, part hilly. Surface of farm, part hilly, part level. Soil, silt loam. Acres in meadow, 300; in natural pasture, 100; in timber, 400, second growth hemlock, chestnut, maple, some large basswood and ash. Acres tillable, 400. Fruit, apples, cherries and peaches. Adapted to oats, buckwheat, potatoes, etc. Fences, wire and board; wire fences in good condition. House, 30x30, fair condition. Outbuildings: 40x60, with addition, 30x40; barn, 30x30, in good condition. Watered: house by well, barns by spring, fields by springs and creek. Reason for selling, other business. Price, \$10,000. Terms, \$2,000 to \$4,000 cash, balance on mortgage. Address the S. Alfred Seely Co., owners, Spencer, N. Y. Will rent with option to buy.

No. 511.—Farm of 80 $\frac{1}{2}$ acres; located 1 mile from Halsey Valley P. O., R. D. No. 2 and railway station at West Candor on line of Lehigh Valley R. R.; 1 mile from school, butter factory and churches; 5 miles from milk station; 7 miles from condensing plant. Highways, good, some hilly. Nearest large village, Owego, population, 4,570, 12 miles distant, reached by highway. Surface of farm, rolling. Soil, loam. Acres in meadow, 30; in timber, 15, beech, birch and maple. Acres tillable, 65. Fruit, 25 apple trees and some cherries. Adapted to nearly all kinds of crops. Fences, wire, in good condition. House, 11 rooms, in good condition. Outbuildings: barn 32x44; poultry house; hog houses and wood house, in good condition. Fine cellar under house and barn. Watered: house, by well; barns, by spring; fields by springs and brook. Occupied by tenant. Price, \$2,000. Terms, $\frac{1}{2}$ cash, balance on mortgage at 5%. Reason for selling, has another farm. Address William G. Shaw, owner, Spencer, N. Y. Owner will rent.

No. 512.—Farm of 10 acres; located $\frac{1}{8}$ mile from Spencer P. O. and short distance from railway station on line of Lehigh Valley R. R.; $\frac{1}{8}$ mile from school, churches, butter factory and milk station. Nearest city, Ithaca, population 16,750, 18 miles distant, reached by rail or highway. Nature of soil, loam. Acres in meadow, 7 $\frac{1}{2}$. Acres tillable, 7 $\frac{1}{2}$; in timber, 1, oak and hickory. Fruit, 10 plum, 5 peach, 8 cherry, 10 apple, 10 pear and 2 quince trees, and small fruit. Adapted to garden truck. Fences, wire, good condition. House, 17 rooms arranged for two families, good condition. Outbuildings: barn, hog house, poultry house, all in good condition. House, watered by well. Occupied by owner. Reason for selling, other business. Price, \$1,800. Terms, \$1,200 cash, balance on mortgage. Address William Stark, owner, Spencer, N. Y.

TOWN OF TIOGA

Population 2,004

No. 513.—Farm of 100 acres; located 1 $\frac{1}{4}$ miles from Tioga Center P. O.; 1 $\frac{1}{2}$ miles from railway station, on line of Erie & L. V. R. R.; 1 mile from school; 1 $\frac{1}{2}$ miles from churches and milk station. Highways, good. Nearest village, Owego, population 4,570, reached by rail, highway and auto bus. General surface

**FIG. 66.—BUILDINGS ON FARM NO. 511, TOWN OF SPENCER, TIOGA
COUNTY.**

**FIG. 67.—BUILDINGS ON FARM NO. 526, TOWN OF NEW
PALTZ, ULSTER COUNTY.**



of farm, rolling. Altitude, 700 feet. Nature and quality of soil, loam; good. Acres that can be used as meadow, 60; in natural pasture, 10, and 30 acres wood, with some timber. Acres tillable, 70. Fruit, about 20 small trees of various kinds. Adapted to corn, potatoes, oats, rye and buckwheat. Fences, wire and pine stump, fair condition. House, 2 stories, L shape, 16x32, each L nearly

new. Outbuildings: 2 barns, one 32x44, with basement, good condition; cow barn, 16x32, with basement; 14-foot silo, good condition. House watered by spring, barns by spring and fields by spring and creek. Occupied by tenant. Reason for selling, owner not able to work it. Price, \$3,000. Terms, one-third cash, balance on mortgage at 5%. Address Fred Clark, owner, Tioga Center, N. Y.

TOMPKINS COUNTY

Area, 494 square miles. Population, 36,535. Annual precipitation, 38.28 inches. Annual mean temperature, 47.3°. Number of farms, 2,988. County seat, Ithaca.

This county is situated in the south central part of the state and comprises the Southern part of Cayuga Lake, the head of which is near the middle of the county.

The surface is partly undulating and is diversified with hills and valleys. In the northern part of the county, from a line running east from Ithaca, the surface is gently undulating and level. The southern and eastern portions of the county are quite hilly, diversified with wide valleys and deep ravines. The soil of the entire county is mostly of a rich sandy and gravelly loam with deposits of black loam scattered over the northern part. About nine miles northwest of Ithaca is a cataract called Taughhannock Falls, which has a perpendicular height of 190 feet. This is higher than Niagara Falls. Forests of pine, oak, ash, elm, beech, sugar maple, etc., cover a considerable portion of the county. Tully limestone, slate and sandstone are among the minerals of the county. The county ranks third in the production of salt.

Along the shore of Cayuga Lake, the grape industry is in a high state of development. Leading crops as reported were: corn, 278,503 bushels; oats, 596,746 bushels; wheat, 144,917 bushels; buckwheat 293,086 bushels; barley, 46,679 bushels; potatoes, 689,360 bushels; hay and forage, 88,527 tons. Of domestic animals there are reported: Dairy cows, 15,008; horses, 8,120; swine, 8,928; sheep, 19,644; poultry, 183,706. The total value of farm property is \$14,896,795 an increase of 17 per cent. over the census of 1900. The average price of improved farm land is \$42.82 per acre. The milk production was 8,059,296 gallons; total receipts from the sale of dairy products, \$732,549.

The county is intersected by the main line and three branches of the Lehigh Valley railroad and by a branch of the Delaware, Lackawanna and Western. Ithaca has a population of 16,750 and is the home of Cornell University, one of the leading institutions in the country. The State Agricultural College is also located there. There are 152 district schools, which, with the academies and graded schools in villages, furnish excellent educational facilities. The 35 milk stations and factories supply the needs of the farmers along dairy lines; and the interest in farming and fruit raising is maintained by an ample number of agricultural organizations.

TOWN OF DANBY

Population 1,230

No. 514.— Farm of 120 acres; located $2\frac{1}{2}$ miles from Brookton P. O., R. D. No. 24; $1\frac{1}{2}$ miles from railway station at Caroline, on line of D., L. & W. R. R.; $\frac{3}{4}$ mile from school; $1\frac{1}{2}$ miles from churches; $4\frac{1}{2}$ miles from butter factory; 6 miles from cheese factory; 7 miles from milk station and condensing plant. Highways, usually good. Nearest city, Ithaca, population 16,750, 7 miles distant, reached by rail or highway. Surface of farm, nearly level. Acres that

can be used as meadow, 80; in natural pasture, 20; in timber, 30, hardwood. Acres tillable, 80. Fruit, 40 trees of different varieties, also 10 peach trees. Best adapted to hay, potatoes and grains. Fences, wire, good condition. House, good size, in good condition. Barn, 30x40, fair condition. House watered by well, barns by well and fields by springs. Occupied by tenant. Reason for selling, other business. Price, \$2,500. Terms, \$1,000 cash, balance on time. Address A. B. Smith, owner, Branchport, N. Y. Will rent.

TOWN OF ENFIELD

Population 1,057

No. 515.—Farm of 102 acres; 2 miles from post office; $9\frac{1}{2}$ miles from railway station at Trumansburg; $\frac{1}{2}$ mile from school; 3 miles from churches. Highways, state road. Soil, good. Some timber. Fruit, apple orchard. Adapted to any kind of crop. Fences, in fair condition. No house. Two barns, in fair condition. Watered by well, creek and streams. Reason for selling, to settle an estate. Price, \$3,800. Terms, part cash, remainder on time. Address Sophia A. White, owner, 58 Port Watson street, Cortland, N. Y.

TOWN OF GROTON

Population 3,501

No. 516.—Farm of $78\frac{1}{2}$ acres; located $1\frac{1}{2}$ miles from McLean P. O. R. D. No. 14, Groton; $1\frac{1}{2}$ miles from railway station at McLean, on line of Lehigh Valley R. R.; $\frac{3}{4}$ mile from school; $1\frac{1}{2}$ miles from churches; 2 miles from butter factory; 4 miles from cheese factory and 2 miles from milk station. Highways, good. Nearest city, Cortland, population 12,367, 6 miles distant, reached by rail and highway. General surface, level and rolling. Nature of soil, gravelly loam. Acres in meadow, 70; in natural pasture, 6; in timber, 6, maple, elm and beech. Acres tillable, 90. Fruit, apples, pears and plums. Best adapted to wheat, corn, oats and potatoes. Fences, wall and wire. Large house, good condition. Barns enough for size of farm, fair condition. Watered, house, by running water and well; barns by running water, and fields, by springs and brook. Unoccupied. Reason for selling, ill health. Price, \$45 per acre. Terms, \$1,000 cash, balance on mortgage at 5%. Address, Searls Butts, owner, Groton, N. Y., R. D. 13.

TOWN OF LANSING

Population 2,612

No. 517.—Farm of 150 acres; located $1\frac{1}{2}$ miles from South Lansing P. O. and railway station, on line of Ithaca and Auburn R. R.; $\frac{1}{2}$ mile from school; 1 mile from churches; $\frac{1}{2}$ mile from butter factory and two creameries and $\frac{3}{4}$ mile from milk station and condensing plant. Highways, level, good. Nearest city, Ithaca, population 16,750, 8 miles distant, reached by rail or highway. Altitude, 500 feet. Soil, gravelly loam. Acres that can be used as meadow, 75; in natural pasture, 15; in timber, 2,

mostly maple. Acres tillable, 135. Fruit, 200 trees of different varieties. Adapted to all kinds of grain, potatoes, beans, etc. Fences, nearly all wire, in good condition. 14-room house, also 7-room tenant house, in good condition. Outbuildings: new barn, 36x56; stanchions for 15 cows; milk house, etc. Watered, house by well, barns piped from spring, fields by springs and brooks. Occupied by owner. Reason for selling, ill health. Price, \$14,500. Terms on application. Stock, up-to-date farm machinery, etc., can also be purchased at a reasonable price. The State College of Agriculture at Ithaca only 8 miles distant. Address S. B. Furman, owner, Ithaca, N. Y., R. D. No. 1.

TOWN OF NEWFIELD

Population 1,647

No. 518.—Farm of 159 acres; located $2\frac{1}{2}$ miles from Alpine P. O. and railway station, on line of Lehigh Valley R. R.; $\frac{1}{2}$ mile from school; $2\frac{1}{2}$ miles from churches and milk station. Highways, hilly. Nearest city, Ithaca, population 16,750, 14 miles distant, reached by state road. General surface, mostly level. Altitude, 1,900 feet. Nature of soil, clay loam. Acres that can be used as meadow, 60; now used as meadow, 20; in natural pasture, 20; in timber, 45, stove wood, beech and maple. Acres tillable, 95. Fruit, cherries, apples and some grapes. Adapted to oats, buckwheat, hay and potatoes. Fences, wire and rail. 8 room house, good condition. Outbuildings, barn, 32x40; sheep shed, 16x40; granary; shop, 16x20 and poultry house. Watered, house, by well; and fields, by springs. Occupied by tenant. Reason for selling, ill health of wife. Price, \$13 per acre. Terms, $\frac{1}{2}$ cash, balance on mortgage, with yearly payments of \$200. Address E. L. Cozier, owner, Alpine, N. Y., R. D. No. 2.

No. 519.—Farm of 105 acres; located 6 miles from Newfield P. O., R. D. No. 29; 5 miles from railway station at Alpine, on line of Lehigh Valley R. R.; $\frac{1}{4}$ mile from school; $2\frac{1}{2}$ miles from churches and milk collected at the door. Highways, hilly. Nearest city, Ithaca, population 16,750, 11 miles distant, reached by highway. General surface, nearly level. Altitude, 2,000 feet. Nature of soil, clay loam. Acres that can be used as meadow, 70; now used as meadow, 25; in natural pasture, 12; in

ON MANY FARMS THERE IS A CONSIDERABLE ACREAGE OF SOIL ADAPTED TO ,
THE PRODUCTION OF ONIONS, CELERY AND OTHER VALUABLE CROPS.



timber, 15, chestnut, oak, maple and pine. Acres tillable, 90. Fruit, 50 apple, 12 cherry trees, 15 grape vines and berries. Adapted to potatoes, buckwheat, oats and hay. Fences, rail and wire. Five-room house, not very good. Outbuildings, barn, 30x40, with basement, hip roof, good condition; poultry house and shed. Watered, house, by well; barns, by well; and fields, by

spring. Occupied by owner. Reason for selling, old age. Price, \$17 per acre. Terms, \$800 cash, balance on 5 years' mortgage. Address Palmer Sickler, owner, Newfield, N. Y.

No. 520.—Farm of 85 acres, 2 miles from Newfield. Good house and barn. Well watered. Price, \$1,800. Address Sophia A. White, owner, 58 Port Watson street, Cortland, N. Y.

ULSTER COUNTY

Area, 1,150 square miles. Population, 85,367. Annual precipitation, 38.28 inches. Annual mean temperature, 46.3°. Number of farms, 5,022. County seat, Kingston.

This county is located in the eastern part of the state and is bounded on the east by the Hudson River. It is intersected by the Wallkill and Rondout Rivers and is drained by the Neversink and the Shawangunk Rivers and by Esopus Creek.

The surface is hilly and partly mountainous and is extensively covered with forests of hickory, oak, chestnut, elm, pine, sugar maple, hemlock, etc. The southern part is occupied by the Shawangunk Mountains and the northern part by the Catskill Mountains. There are several lakes, among which is Lake Mohawk, a popular summer resort. Devonian sandstone is found here in abundance and large quantities are quarried and shipped to New York City and other points by water. Extensive quantities of water lime are used in making Portland cement, an industry which exceeds a million dollars in value annually. The soil is quite productive, especially in the valleys along the Hudson River and is mostly of a clay and gravelly loam; considerable limestone soil is also found. Crops reported are: corn, 433,322 bushels; oats, 225,235 bushels; wheat, 24,627 bushels; buckwheat, 93,557 bushels; rye, 103,132 bushels; potatoes, 293,415 bushels; hay and forage, 90,285 tons. Along the Hudson River, conditions are exceedingly favorable for the growing of small fruits and apples, pears, peaches, etc. This county ranks first in the production of small fruits and third in the production of grapes. The villages and cities of the county furnish large markets and New York City can be reached quickly and cheaply by way of the Hudson River. The valuation of all farm property is \$29,439,672, an increase of 16.7 per cent. over that of 1900. There is a large acreage offered for sale in this bulletin at a price below the agricultural value of the land. Domestic animals reported: Dairy cows, 23,065; horses, 9,724; swine, 14,843; sheep, 5,721; poultry, 265,195. Total production of milk, 10,702,160 gallons, and the total value of all dairy products is \$1,015,894.

Excellent transportation facilities are found in this county and the markets are ample for everything that can be raised. The city of Kingston, the county seat, has a population of 26,354 and is located 85 miles from New York City and 55 miles from Albany. At New Paltz, a state normal college is located. Two hundred and eighteen district schools and academies and graded schools in villages give ample educational advantages. There are 74 miles of state and county roads and 1,561 miles of other improved highways. Ulster county has 16 agricultural associations for the promotion of general farming and stock raising.

TOWN OF GARDINER

Population 1,328

No. 521.—Farm of 150 acres; located 3 miles from New Paltz, on line of Wallkill Valley R. R.; ½ mile from school; 3½ miles from churches, milk station and milk condensing plant. Highways, good. Surface of farm, mostly level. Acres in meadow, 25; in natural pasture, 16; in timber, 10. Acres, tillable, 110. Fruit, 3 acres of apples. Best adapted to general farming. Fences, wire and stone wall, good. House, 62x

25, 2½ stories, 14 rooms; tenant house, 2 stories, 4 rooms. Both houses practically new. Barn, 123x30. Watered by well, cistern and spring. Occupied by tenant. Price, \$3,900. Terms, half down, balance on mortgage. Address Henry L. Rymph, owner, Poughkeepsie, N. Y., R. F. D. Will rent.

No. 522.—Farm of 176 acres; located 3 miles from New Paltz, on line of Wallkill Valley R. R.; 1 mile from school; 3½ miles from milk station,

and churches. Highways, good. Surface of farm, mostly level. Soil, clay loam. Acres in meadow, 10; in natural pasture, 26; in timber, 11. Acres tillable, 118. Some fruit. Best adapted to general farming. Fences, stone wall and wire. House, large, 12 rooms, nearly new; 2 tenant houses, four and five rooms. Outbuildings: barn, 45x45, leanto attached, 30x40, accommodate 50 head of stock, granary, wagon house and poultry house, all in first-class condition. Watered, house, by well and cistern; barns, by well; fields, by stream. Occupied by tenant. Reason for selling, owner in other business. Price, \$3,900. Terms, half down, balance on bond and mortgage. Address Henry L. Rymph, owner, Poughkeepsie, N. Y., R. F. D. Will rent.

TOWN OF HARDENBERGH

Population 565

No. 523.—Farm of 260 acres; 2 miles from Lew Beach P. O.; 8 miles from station at Shavertown, on line of D. & N. R. R., $\frac{1}{2}$ mile from school; 2 miles from churches. Highways, hilly. Surface, rolling. Soil, red slate, clay and loam, mixed. 80 acres of meadow; 90 acres of pasture; 100 acres timber, hemlock, hard wood, etc.; about 150 acres tillable. Large apple orchard and a few pear trees. Maple orchard of about 400 trees. Adapted to raising of oats, rye, buckwheat, potatoes, and to dairying. Fences of stone, wire and board, in fair condition. $1\frac{1}{2}$ story house, 8 rooms, in fair condition. Barn, 26x48, with annex, 14x48; wagon house, 24x26, with annex, 26x36; granary; poultry house; hog pen; sap house, in fair condition. House and barns are watered by springs; fields, have springs and a trout stream. A good dairy, sheep and poultry farm, with good markets. Occupied by owner. Price, \$3,500. Terms, \$1,500 cash, balance easy. Address Byron Barnhart, owner, Lew Beach, Sullivan County, N. Y.

No. 524.—Farm of 146 acres; located $1\frac{1}{2}$ miles from Seager P. O.; 6 miles from railway station at Fleischmans, on line of U. & D. R. R.; 1 mile from school; $2\frac{1}{2}$ miles from churches; 6 miles from butter factory, cheese factory, milk station and condensing plant. Highways, good. General surface of farm, rolling. Altitude, 2,400 feet. Nature and quality of soil, red

slate and loam. Acres in meadow, 30; in natural pasture, 20; in timber, 96, beech, birch, maple and basswood. Acres tillable, 100. Fruit, apple trees of all varieties. Adapted to buckwheat, cauliflower, oats, potatoes and hay. Fences, wire, good condition. House, 28x32, good condition. Barns, 30x50; poultry house, 10x20, good condition. House, barns and field watered by springs. Occupied by tenant. Reason for selling, other business. Price, \$2,500. Terms, half cash, balance on mortgage. Address W. Scott Haynes, owner, Arena, N. Y. Will rent.

TOWN OF KINGSTON

Population, 323

No. 525.—Farm of 86 acres; located 2 miles from Kingston P. O., R. D. No. 4 and railway station on line of W. S. R. R.; 1 mile from churches and school; 2 miles from butter factory and condensing plant. Highways, good. Nearest village, Saugerties, population 4,490. General surface, level and rolling. Nature of soil, sand and muck. Acres in timber, 15; tillable, 50. Adapted to general farming. House, 50x40, brick, 2 stories and basement, 12 large rooms, in good condition. Outbuildings, barn, 50x40, fair condition; barn, 15x35, for garage and room. Watered, house, by spring near, and barns, by spring. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address Augusta Gilbert, owner, Kingston, N. Y., Box 182. Will rent with option to buy.

TOWN OF NEW PALTZ

Population 2,569

No. 526.—Farm of 125 acres; located $2\frac{1}{2}$ miles from New Paltz P. O., and railway station on line of Wallkill Valley R. R.; 1 mile from school; $2\frac{1}{2}$ miles from churches and milk station. Highways, good. Acres that can be used as meadow, 100; in natural pasture, 10; in timber, 13, hickory, chestnut, maple and oak. Acres tillable, 100. Fruit, 4 acres of grapes and 4 acres of apples. Adapted to hay. Fences, wire. House, 26x35, good condition. Outbuildings, barns, 40x40, 24x40, silo attached, 20x50; tool house, 16x20; granary; garage; poultry house, etc. Watered, house and barns, from a reservoir; fields, by springs. Occupied by owner. Reason for selling, wish to retire. Price, \$7,000. Terms, $\frac{1}{2}$ cash. Address D. W. Corwin, owner, New Paltz, N. Y.

FIG. 68.— BUILDINGS ON FARM NO. 522, TOWN OF GARDINER, ULSTER
COUNTY.

TOWN OF ROCHESTER

Population 2,715

No. 527.— Farm of 143 acres; 3 miles from Mombaccus P. O., R. D. No. 1; $6\frac{1}{2}$ miles from railway station at Kerhonksen on line of O. & W. R. R., $1\frac{3}{4}$ miles from school; $\frac{3}{4}$ mile from church; $6\frac{1}{2}$ miles from milk station. Highways, hilly, but good. Nearest city, Kingston, population 26,354, 26 miles distant, reached by rail. Surface, part level and part hilly. Soil, mostly gravelly loam. Acres in meadow, 20; in orchard and natural pasture, 65; in timber, 58, chestnut, hickory and oak; acres tillable, 85. Fruit, about 375 trees, mostly apple. Adapted to hay and fruit. Fences, wire and stone wall, in good condition. House, 24x38, wings, 15x31, and 10x12, in good condition. Barn, 27x70, with large shed and stable attached; carriage house, 22x26; all in good condition. Watered, by well and spring. Occupied by tenant. Reason for selling, old age. Price, \$4,000. Terms, \$1,500 cash, balance on mortgage at 5%. Address H. D. & S. E. Brodhead, owners, Kerhonksen, N. Y.

TOWN OF SAUGERTIES

Population 9,856

No. 528.— Place of 10 acres; $\frac{1}{4}$ mile from West Camp P. O. and railway station on line of W. S. R. R.; $\frac{1}{4}$ mile from school and church; $1\frac{1}{2}$ miles from butter factory. Nearest large villages, Saugerties, population 4,490, $3\frac{1}{2}$ miles distant, reached by rail and highway, and Catskill, population, 5,371, 8 miles distant, reached by rail and highway. Surface of farm, rolling, with high rock ridge overlooking Hudson river. Altitude, about 300 feet. Soil, gravelly and clay loam. Acres in meadow, 3; in natural pasture, 1; in timber, $\frac{1}{4}$, cedar grove; acres tillable, 8. Fruit, 60 apple trees, $\frac{1}{4}$ acre of Concord grapes, besides cherries and plums. Adapted to all kinds of vegetables, grains, alfalfa and small fruits. Fences, stone, wire and wood, fair con-

dition. House, 8 rooms, 18x32, outside summer kitchen, 12x14, house has new cedar shingling. Outbuildings: barn, 26x30, with ell, 18x22, shed, wagon house, 12x18; and hog house, 12x12. Watered: house, by never-failing spring and cistern; fields, by spring near center of farm. This farm is a short distance from Hudson river, about 10 minutes' walk. Catskill Mountains are about 8 miles from farm; Kaaterskill and Old Mountain House in view. This would make a good poultry farm. Occupied by tenant. Reason for selling, owner has other business. Price, \$2,000. Terms, \$500 cash, balance on time or will sell on contract. Address E. F. Youngs, owner, West Camp, N. Y., Box 25.

TOWN OF ULSTER

Population 3,437

No. 529.— Farm of 207 $\frac{1}{2}$ acres; located 1 mile from Kingston P. O., R. D. 1, and railway station on line of West Shore, U. & D., Wallkill Valley, N. Y. O. & W. R. Rs.; 1 mile to school; 1 to 3 miles to churches of all denominations. Highways, state road, 66 acres within city limits of Kingston, population 26,354, reached by highway or trolley. Surface of farm, level, hilly and rolling. Acres in meadow, 75; in natural pasture, 60. All tillable. Fruit, about 70 trees, apple, pear, cherry and mulberry. Adapted to grain, fruit, hay, etc. Fences, wall and wire, in fair condition. House, 10 rooms, in good condition. Outbuildings: stable 110x66; ice house, milk house, granary, poultry house of concrete, silo, large hay barn, also main barn equipped to produce certified milk. Watered, house by well and cistern; barns, by well and pumping engine; fields by springs, pond and brook. This farm is 3 miles from the Hudson river. Price, \$30,000. Terms, \$10,000 or less cash, balance on mortgage. Would consider trade for Albany property. Address B. A. Knapp, owner, 107 South Lake avenue, Albany, N. Y. Substantial reduction to cash buyer.

WARREN COUNTY

Area, 940 square miles. Population, 32,977. Annual precipitation, 32.41 inches. Annual mean temperature, 45.2°. Number of farms, 1,865. County seat, Lake George.

This county is located in the eastern part of the state and is bounded on the east by Lake George, is intersected by the upper Hudson River and is partly drained by the Schroon River.

The surface is mountainous and extensively covered with forests of beech, hickory, oak, elm, pine, spruce, sugar maple and hemlock. Many of the mountains and

hills are steep and present a broad surface of barren rock. Gneiss and granite are the predominant rocks of the county. Trenton limestone and Potsdam sandstone are found in the southeastern part, also black marble. The valleys are fertile and well adapted to pasture. The soil is largely clay loam along the Hudson and Schroon River Valleys, while that in the region of and south of Lake George is sandy and gravelly loam. Crops are reported as follows: Corn, 60,750 bushels; oats, 39,595 bushels; buckwheat, 30,524 bushels; potatoes, 163,673 bushels; hay and forage, 25,345 tons. Lumber is one of the leading products of the county. The total valuation of farm property is \$6,589,308, an increase of 61 per cent. during the past ten years. Domestic animals reported are dairy cows, 5,387; horses, 3,221; swine, 2,070; sheep, 12,111; poultry, 48,354; production of milk, 2,396,268 gallons; dairy products amounted to \$170,423.

The county is traversed by the Adirondack division of the Delaware and Hudson railroad and one of its branches from Fort Edward to Lake George. Trolley lines from Albany, Troy, Schenectady and Saratoga Springs extend up through the county as far north as Warrensburg, through Lake George. Union and graded schools in the villages and towns, an academy at Glens Falls, with 111 district schools, afford the best of educational facilities for the farmer. There are 70 miles of state and county roads, 791 miles of improved highways. Milk stations and creameries are located at Glens Falls and Lake George. In the county are three granges and one county fair society. Much of the increase of the value of farms and farm buildings is brought about by the large number of men of means purchasing tracts or summer homes and cottages in the mountains and along the lake shores.

TOWN OF BOLTON

Population 1,397

No. 530.—Farm of 170 acres; located 4 miles from P. O.; 10 miles from railway station at Warrensburg on line of D. & H. R. R.; $\frac{1}{8}$ mile from school; 2 miles from churches. Highways, somewhat hilly, but good. Surface of farm, some stone but can mow with machine. Soil, fair. Acres in meadow, 21; in natural pasture, 40; in timber, 109, pine, hemlock and maple. Acres tillable, 30. Fruit, apples and plums. Best adapted to potatoes, corn and oats. Fences, stone wall and wire, fair condition. House, 26x20, new. Outbuildings: barn, 30x46; shed, 30x16; poultry house, 13x13. Watered by well, spring and brook. This farm is $1\frac{1}{2}$ miles from Schroon river and $4\frac{1}{2}$ miles from Lake George. Occupied by tenant. Reason for selling, owner lives in village. Price, \$2,500. Terms, \$500 down, balance easy. Address Chas. Davis, owner, Bolton Landing, N. Y. Will rent.

TOWN OF CHESTER

Population 1,630

No. 531.—Farm of 100 acres; $2\frac{1}{2}$ miles from Chestertown P. O.; $2\frac{1}{2}$ miles from railway station at Riverside on line of Adirondack R. R.; $\frac{3}{4}$ mile from school; $2\frac{1}{2}$ miles from churches. Highways, state road. Nearest city, Glens Falls, population 16,323, 27 miles distant, reached by highway. Surface, rolling. Soil, sandy loam. Acres in meadow,

35; in natural pasture, 35; in timber, 30, pine, second growth poplar, balsam, tamarack and some hard wood; acres tillable, 50. Fruit, 50 apple trees. Best adapted to potatoes, buckwheat, corn and oats. Fences, rail and board, fair condition. House, 2 stories, 28x30, with wing, in good condition. Main barn burned, small building, fair condition. Watered by well, also fine spring water comes into house by pump. This is a good place to keep summer boarders; good place on lake front for nearly a mile. Reason for selling, other business. Price, \$4,500. Terms to suit purchaser. Address Dr. F. E. Aldrich, owner, Chestertown, N. Y. Will rent with option to buy.

No. 532.—Farm of 112 acres; located $\frac{1}{4}$ mile from Chestertown P. O.; 6 miles from railway station at Riverside, on line of D. & H. R. R.; 15 rods from school; $\frac{1}{4}$ mile from churches. Highways, good macadam road. Altitude, 800 feet. Nature of soil, sandy loam. Acres used as meadow, 30; in natural pasture, 40; in timber, 40, white pine, spruce and hardwood. Acres tillable, 40. Best adapted to oats and potatoes. Fences, wire and rail, good condition. House, $1\frac{1}{2}$ stories, 8 rooms. Outbuildings: barn, 26x36; granary, 15x20; carriage shed, 12x20; poultry house, 12x15; ash house, 8x10. House watered by well; barns by well and brook; and fields by brook. Occupied by tenant. Reason for selling, to settle estate. Price, \$3,500. Terms,



FIG. 69.— BUILDINGS ON FARM NO. 520, TOWN OF ULSTER, ULSTER COUNTY.

FIG. 70.— DAIRY BARN ON FARM NO. 529, TOWN OF ULSTER, ULSTER COUNTY.



\$1,000 cash, balance on mortgage. Will rent for one year for \$200, or with option to buy. There is a good growth of young pine on the place. Address Estate of John H. Cunningham, 124 W. 121st street, New York city.

TOWN OF JOHNSBURG

Population 2,358

No. 533.—Farm of 90 acres; located 3 miles from Baker's Mills P. O.; 10 miles from railway station at North Creek, on line of D. & H. R. R.; 3 miles from churches. Highways, good. Surface of farm, rolling. Altitude, about 1,900 feet. Some timber. Fruit, apples and plums. Adapted to potatoes, corn, oats and buckwheat. Fences, wire, rail and pole. House, 20x30. Barn 30x40; shed, 25x40, good condition. Watered by spring, brook and well. Occupied by owner. Reason for selling, old age. Price, \$2,000. Terms, cash. Address Mrs. Frances A. Wheeler, owner, Brandon, Vt.

TOWN OF LUZERNE

Population 1,070

No. 534.—Farm of 84 acres; located 4 miles from Luzerne P. O. and 5 miles from railway station at Hadley on line of D. & H. R. R.; 1 mile from school; 4 miles from churches. Highways, hilly. Nearest city, Glens Falls, population 16,323, 14 miles distant, reached by highway. General surface, rolling. Altitude, 650 feet. Nature of soil, light.

Acres in meadow, 15; in natural pasture, 15; in timber, 40, pine, hemlock, poplar and hardwood. Acres tillable, 20. Fruit, some apples. Adapted to corn, hay, oats, potatoes and buckwheat. Fences, fair. House, small, fair condition. Barn, large, fair condition. House watered by well; barns, by well. Hudson river, 1 mile distant. Occupied by tenant. Reason for selling, other business. Price, \$1,000. Terms, ½ cash, balance on mortgage. Address Nathan Pulver, owner, Luzerne, N. Y. Will rent.

TOWN OF QUEENSBURY

Population 2,721

No. 535.—Farm of 80 acres; 1 mile from Queensbury P. O.; R. D. 1; 5 miles from railway station at Glens Falls on line of D. & H. R. R.; 1 mile from school and Methodist church; 5 miles from milk station. Highways, good. Nearest city, Glens Falls, population 16,323, 5 miles distant, reached by highway. Surface, sloping to south. Soil, sandy loam. Acres in meadow, 7; natural pasture, 25; timber, 25, chestnut, pine and oak, second growth; acres tillable, 35. Fruit, 20 apple trees. Best adapted to potatoes and fruit. Watered by well and pond. Fences in poor condition. No buildings except poultry house. Price, \$2,200. Terms, easy. Address Harriet A. Bentley, owner, 11 Pine street, Glens Falls, N. Y. Will rent for \$80 per year.

WASHINGTON COUNTY

Area, 861 square miles. Population, 46,955. Annual precipitation, 35.6 inches. Annual mean temperature, 46.2°. Number of farms, 3,564. County seat, Hudson Falls.

This county is located in the eastern part of the state bordering on Vermont. Lake George bounds the county on the northwest and the Hudson River on the west. It is drained by the Hoosic, Pawlet and Poultney Rivers and by the Battenkill and Weed Creeks. Lake Champlain forms a part of the eastern boundary of the county.

The surface is hilly and mountainous. Along the eastern border extends a range of high hills composed wholly of shale, sand and clay. These hills by the action of rain and weather have deposited a rich deep loam in the valleys and lower uplands. The fertility of this rich loam is constantly being renewed by this same weather agency. Forests of beech, elm, sugar maple, spruce and hemlock and other trees cover a large part of the county. Among its minerals are iron ore, graphite, slate and water lime. The staple crops of the county are exceedingly good, being: corn, 597,342 bushels; oats, 659,913 bushels; buckwheat, 52,264 bushels; rye, 70,016 bushels; potatoes, 1,375,013 bushels; hay and forage, 121,417 tons; considerable flax is also grown in the county. The value of all farm property is \$18,459,934, showing a marked increase over the value of 1900. The average price of improved land is \$31.20 per acre. There are reported, dairy cows, 28,169; horses, 10,070; swine, 12,859; sheep, 36,752; poultry, 167,477; production of milk, 13,521,120 gallons; total receipts from the sale of dairy products, \$1,327,575.

The county is intersected by branches of the Delaware and Hudson railroad and by the Champlain canal. Whitehall is the principal town of the county and has large manufacturing interests, which use large quantities of lumber. There are 224 school districts in the county; 31 miles of state roads and 1,370 miles of graded and improved highways. Twenty-one milk stations and factories take care of the milk interests of the county and 21 agricultural organizations contribute to the agricultural and farming interests.

TOWN OF CAMBRIDGE

Population 1,651

No. 536.—Farm of 55 acres; located $2\frac{1}{2}$ miles from Cambridge P. O. and railway station on line of D. & H. R. R.; $\frac{1}{2}$ mile from school; $2\frac{1}{2}$ miles from churches, milk station and condensing plant. Highways, good dirt road, some hilly. Nearest village, Cambridge, population 1,727, $2\frac{1}{2}$ miles distant, reached by highway. General surface, rolling and level. Nature of soil, good. Acres that can be used as meadow, 15; in timber, 15, oak, chestnut, some small pine. Acres tillable, 25. Fruit, apples, pears and cherries. Adapted to all crops. Fences, woven wire, good. House, 18x30, addition, 12x15; wood shed, 10x12, good condition. Outbuildings, barn, 14x16, additions of hay house, 10x15, shingle roof, recently painted; basement barn, 30x40, with slate roof; stable and open shed. Watered, house, by spring; barns, by spring; and fields, by spring. Occupied by owner. Price, \$2,000. Terms, easy. Address E. P. Hatch, owner, Cambridge, N. Y., Box 400.

TOWN OF GREENWICH

Population 4,321

No. 537.—Farm of 260 acres; located $2\frac{1}{2}$ miles from Greenwich P. O. and railway station on line of Greenwich and Johnsonville branch of the D. & H. R. R.; $2\frac{1}{2}$ miles from school and churches. Highways, state road. General surface of farm, level. Nature of soil, dark loam. Acres in meadow, 200; in pasture, 20; in timber, 20; acres tillable, 200. Fruit, for home use. Adapted to corn, oats, rye, potatoes and vegetables. House, 2 stories, good condition. Outbuildings, 2 large barns, 1 small one, good condition. House and barns watered by springs; fields, by Battenkill river, which forms north boundary of farm. Reason for selling, to close estate. Price, \$7,000. Terms, reasonable. Address L. G. Thompson, owner, Greenwich, N. Y.

No. 538.—Farm of 106 acres; $1\frac{1}{2}$ miles from Greenwich P. O., R. D. 5; $1\frac{1}{2}$ miles from railway station at Green-

wich on line of B. & M. R. R.; $\frac{1}{4}$ mile from school; $1\frac{1}{2}$ miles from churches, butter and cheese factory and milk station. Highways, good. Nearest village, Greenwich, population 2,315 $1\frac{1}{2}$ miles distant, reached by rail and highway. Surface, level and rolling. Soil, sand and clay loam. Acres in meadow, 25; natural pasture, 20; timber, 5, pine and hardwood; acres tillable, 90. Fruit, choicest kind, young trees, bearing 4 years. Best adapted to potatoes, corn, oats and rye. Fences, stone wall and wire, in good condition. Brick house, 48x36, 2 stories, slate roof, 4 cellars, woodshed attached. Outbuildings: 3 barns, 1, 30x40; 1 large cow barn, 1 new barn, holds 30 tons of hay; large ice house; carriage house, hog pen for 50 hogs; corn house, in good repair. Watered by wells, springs and cistern. Occupied by owner. There is a building that has been used for meat market which could be used as tenant house; also slaughter house suitable for barn. Reason for selling, poor health of owner. Price, \$5,000. Terms, cash. Address O. S. Platt, owner, Greenwich, N. Y., R. D. 5. Will rent.

TOWN OF HEBRON

Population 1,356

No. 539.—Farm of 100 acres, 5 miles from West Hebron P. O., R. D. 2; 9 miles from railway station on line of D. & H. R. R.; 1 mile from school; $2\frac{1}{2}$ miles from church; $1\frac{1}{2}$ miles from butter factory and cheese factory; 8 miles from milk station. Highways, rolling but good. Nearest village, West Hebron, population 452, reached by highway. Surface of farm, rolling. Soil, slate and loam. Acres in meadow, 15; in timber, 20, hard wood, oak and chestnut; acres tillable, 60. Fruit, apples, plums, pears and grapes. Best adapted to potatoes, oats and rye. Fences, wire, rail and stone, good condition. House, 5 rooms, large pantry, clothes closet and hall. Outbuildings: new barn, 32x42, slate roof, basement. Watered, house by well; barns and fields, by springs. Land is worked on shares; house is not occupied. Reason for selling, owner has

another farm. Price, \$1,800. Terms, 1-3 cash. Address John A. Dennison, owner, Salem, N. Y.

No. 540.— Farm of 100 acres; located 3 miles from West Hebron P. O.; 10 miles from Salem, on line of D. & H. R. R.; 1 mile from school; 2 miles from churches; $1\frac{1}{2}$ miles from cheese factory and 3 miles from milk station. Highways, good. General surface of farm, rolling. Nearest village, Salem, population 1,096, 10 miles distant, reached by highway. Nature of soil, loam. Acres now used as meadow, 50; in natural pasture, 40. Acres tillable, nearly all. Fruit, apples, pears, cherries, plums, grapes and currants. Adapted to any crops. Fences, stone and wire, in fair condition. House, 30x40, with slate roof and flagged cellar bottom. Outbuildings, barn, 30x40, with slate roof; cow shed, 35x20, with stanchions for 20 head of cattle; horse barn, 40x30, and hog house, 20x25, all buildings slated. Watered, house by cistern and well. Unoccupied. Reason for selling, owner a widow. Price, \$3,500. Terms, \$2,000 cash, balance on mortgage. Address Mrs. Nancy W. Ashley, owner, West Hebron, N. Y.

TOWN OF JACKSON

Population 988

No. 541.— Farm of 115 acres; located 4 miles north of Cambridge village, on fine state road; 2 miles from railway station at Shushan, on line of D. & H. R. R.; $\frac{1}{2}$ mile from school; 2 miles from churches; 4 miles from butter and cheese

factory, milk station and condensing plant. Population of Cambridge, 1,727. General surface of farm, rolling, with a portion hilly. Altitude, 550 feet. Acres in meadow, 65; in pasture, 40; in timber, 10. Acres tillable, 105. Soil is adapted to all crops grown in this latitude and especially for apples. Fruit, 450 apple trees, also pears, plums, cherries and small fruits. Fences, wire, in good condition. House 40x60, in fine state of repair, with modern improvements, beautifully located on elevation overlooking Lake Lauderdale, on which the farm has a considerable frontage. Outbuildings consist of cow barn, 40x60; horse barn, 40x35; stock shed and tool house, 40x20. Farm is watered by never-failing springs, from which water is piped to house and barns. A good income is realized during the summer season from lease of boats and accommodations to summer boarders. Reason for selling, owner has other business. Price, \$8,000. Address William Balis, owner, Cambridge, N. Y. R. D. No. 1.

TOWN OF SALEM

Population 2,473

No. 542.— Farm of 198 acres; 4 miles from Shushan; R. D. 4 miles from Salem. Good stock and grain farm. 10 acres timber. $1\frac{1}{2}$ -story house, 48x27, with wing, 16x30, very comfortable and in good repair. Two barns, 26x48; woodshed, 30x20, both good. $\frac{1}{2}$ mile trout brook. Well watered and fenced. Price, \$2,800. Terms, \$1,500 cash, balance on mortgage. Address Patrick Hughes, owner, Shushan, N. Y., R. D.

WAYNE COUNTY

Area, 621 square miles. Population, 53,476. Annual precipitation, 41.36 inches. Annual mean temperature, 50°. Number of farms, 5,237. County seat, Lyons.

This is one of the north tier counties bordering on Lake Ontario and is drained by the Clyde River and Mud Creek, which unites with the Canandaigua outlet at Lyons.

The surface is undulating and diversified with long, low and parallel ridges running north and south. There are considerable woodlands of beech, ash, hickory, elm, oak, sugar maple and other trees covering about one-sixth of the county. Excellent building stone, iron ore and gypsum are found. The soil is of the same general nature as the other counties bordering on Lake Ontario, except that in the level strip along the lake, where clay and gravelly loam appear in about equal quantities. In the eastern half of the county on both sides of, and including the Clyde River Valley, black dirt with occasional areas of dark, gravelly loam is found. In the western half along the Mud creek valley and south to the county line the soil is composed of sandy and gravelly loam. The crops reported are: corn, 911,653 bushels; wheat, 337,333 bushels; barley, 70,000 bushels; dry beans, 79,422 bushels; potatoes, 1,049,202 bushels; hay and forage, 104,117 tons. About 50,000 bushels of buckwheat and rye were also produced. The value of all farm property is \$34,481,902, an increase over that of 1900 of 45.7 per cent. Domestic animals are reported

as follows: Dairy cows, 20,645; horses, 15,373; swine, 20,749; sheep, 24,587; poultry, 343,400; production of milk, 9,930,245 gallons valued at \$875,893.

The county is traversed by the Erie (Barge Canal), the New York Central and Hudson River; West Shore; Rome, Watertown and Ogdensburg, and Northern Central railroads. There are also electric lines extending in the various directions throughout the county. Lyons, the principal city of this county, contains flour mills, distilleries, barrel manufactories and extensive beet sugar factories. Ample markets for everything produced in this county are near at hand in the cities of Rochester, Syracuse, Buffalo, etc.

There are 209 district schools in the county, 26 miles of state and county roads and 552 miles of other improved highways; 26 milk stations are conveniently located throughout the county. One Pomona grange; 20 subordinate granges; a fair association; a union agricultural society; county fire relief association; county agricultural society, county fruit growers' association and the Williamson Fruit Growers' Association constitute the different farmers' associations of the county.

TOWN OF BUTLER

Population 1,734

No. 543.—Farm of 108 acres; located 2 miles from South Butler P. O., R. D. No. 1; 5 miles from railway station at Wolcott, on line of R., W. & O. R. R.; $\frac{1}{2}$ mile from school; 2 miles from churches, butter factory, cheese factory and milk station. Highways, good. General surface of farm, comparatively level. Altitude, 325 feet. Nature of soil, clay loam. Acres in natural pasture, 15; in timber, 10, beech, maple and basswood. Acres tillable, 95. Fruit, 300 apple trees, good varieties. Adapted to wheat, oats, corn, barley and hay. Fences, wire, good condition. 14-room house, in good condition. Barn, 80x40, lean-to, 16x30; new horse barn, 22x15; corn house; new poultry house, etc. House, watered by well; barns, by well and fields by springs and well. Occupied by tenant. Reason for selling, ill health. Price, \$7,500. Terms, \$2,500 cash, remainder on mortgage at 5%. Will rent with option to buy. Address John Baldwin, owner, South Butler, N. Y.

TOWN OF GALEN

Population 4,643

No. 544.—Farm of 205 acres; located 4 miles from railway station at Clyde, on line of N. Y. C. & W. S. R. Rs.; $\frac{1}{2}$ mile from school and milk station; 4 miles from churches, butter factory and cheese factory. Highways, good. General surface of farm, rolling. Nature of soil, sandy loam. Acres in meadow, 75; in timber, 15, beech and maple. Acres tillable, 185. Fruit, 600 trees, apples, pears, plums and cherries. Best adapted to wheat, barley, corn and oats. 12-room house, in fair condition. 4 large barns. House watered by well, barns, by well, and fields, by springs. Occupied

by tenant. Reason for selling, old age. Price, \$9,000. Terms, $\frac{1}{2}$ cash, balance on mortgage. Address Mrs. David Finch, owner, Clyde, N. Y.

No. 545.—Farm of 200 acres; located 3 miles from Clyde P. O., R. D. and railway station on lines of N. Y. C. & W. S. R. Rs.; $2\frac{1}{2}$ miles from school and churches; 3 miles from butter factory, cheese factory and milk station. Highways, state road. Nearest village, Clyde, population 2,699, 3 miles distant, reached by highway and trolley. General surface, rolling. Nature of soil, good. Acres in meadow, 20; in natural pasture, 20; in timber, 10, beech and maple. Acres tillable, 150. Fruit 1,500 trees, all varieties. Best adapted to corn, wheat, barley and grain. Fences, woven wire. Large brick house in good condition. Outbuildings: 3 barns, large: 2 hog houses, 1 stone storage building 26x46x16. House and barns watered by well; fields, by spring and river. Occupied by owner. Reason for selling, wishes to retire. Price, \$17,000. Terms, \$4,000 cash, balance on mortgage. Address Frank L. Waldorf, owner, Clyde, N. Y.

TOWN OF HURON

Population 1,681

No. 546.—Farm of 200 acres; located $2\frac{1}{2}$ miles from North Rose P. O., R. D. No. 1, and railway station, on line of R., W. & O. division of N. Y. C. R. R.; $\frac{1}{2}$ mile from school; $2\frac{1}{2}$ miles from churches; 5 miles from butter factory; 3 miles from cheese factory and $2\frac{1}{2}$ miles from milk station. Highways, good. Surface, rolling. Altitude, 600 feet. Soil, clay loam. Acres that can be used as meadow, 125; in natural pasture, 15; in timber, 15, chestnut. Acres tillable, 170. Fruit, 1,000 apple and 100 pear trees, all varieties. Adapted to all crops. Fences, wire, good condition.

**THE AVERAGE ACRE OF CORN IN NEW YORK IS WORTH \$14.78 MORE THAN
THE AVERAGE OF THE TWELVE LEADING GRAIN STATES IN THE UNION.**

FIFTEEN-YEAR-OLD APPLE ORCHARD, GENESEE COUNTY, N. Y.



25-room house; cellar under all, steam heat, in good condition. Outbuildings: barns, 40x100, 20x35, 30x40; tool shed, 20x40; new silo; hog pen, 10x15, all newly painted; concrete floors. Also 8-room tenant house. Number of acres of muck land. House watered by well, barns by well and fields by well and streams. Occupied by owners. Price, \$25,000. Terms, \$5,000 cash, balance on easy terms. Address Bridger & West, owners, Alton, N. Y.

TOWN OF SODUS

Population 5,757

No. 547.— Farm of 200 acres; located 1 mile from Alton P. O., R. D. 1 and railway station on line of N. Y. C. R. R.; $\frac{1}{2}$ mile from school; 1 mile from churches; 6 miles from butter and cheese factory and milk station. Highways, state road. Nearest village, Lyons, 5 miles distant, population 4,742, reached by rail or highway. General surface of farm, level. Acres in meadow, 100; in timber, 10, hard and soft wood; acres tillable 175. Fruit, 10 acres of young orchard. Best adapted to stock raising. Fences, wire, in fair condition. New silo. House and barns watered by wells; fields, by running water. Occupied by tenant. Price, \$10,000. Terms, easy. Address Christopher Gatchell, owner, Alton, N. Y.

No. 548.— Farm of 27 acres; located 1 mile from Sodus P. O., R. D. No. 2; $1\frac{1}{2}$ miles from railway station at Sodus on line of R. W. & O., N. Y. C. R. Rs.; $\frac{1}{2}$ mile from trolley line, high school and churches. Highways, good improved road. Nearest city, Rochester, population 248,465, 30 miles distant, reached by highway and rail. General surface, level. Nature of soil, sandy loam. Acres in natural pasture, 2; in timber, 4, beech, maple and ash. Acres

tillable, 3. Fruit, 210 apple, 200 quince, 40 plum, 180 peach, 380 pear, and 275 cherry trees. Adapted to fruit. Fences, good. 8-room house, in good condition. 2 barns, 30x60; 2 other buildings, 16x28 and 14x20, fair condition. Watered, house, by well; barns, by well, and fields by spring. Lake Ontario, 3 miles distant. Reason for selling, other business. Price, \$12,000. Terms, cash. This farm has a good equipped dry house, 3 acres of berries and 2 acres of good muck land. Address John C. Deneef, owner, Sodus, N. Y.

TOWN OF WOLCOTT

Population 3,261

No. 549.— Farm of 55 acres; 2 miles from Fair Haven P. O., R. D. 5, on L. V. R. R.; $4\frac{1}{2}$ miles from railway station at Red Creek on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches; 2 miles from shipping station; $4\frac{1}{2}$ miles from cheese factory. Highways, fair. Nearest city, Oewego, population 25,426, 16 miles distant, reached by rail. Surface, rolling and hilly. Soil, clay loam and gravel. Acres in meadow, 12; natural pasture, 7; timber, 4, beech and maple; acres tillable, 50. Fruit, 100 apple, 90 pear, 12 peach, 6 plum, 4 prune trees, cherries, quinces and grapes. Adapted to wheat, oats, corn, potatoes and hay. Fences, wire and rail, good condition. House, 9 rooms, furnace, first-class condition, and woodhouse. Outbuildings, main barn, almost new, with basement, 30x55; new wagon house, 18x30; concrete floors in all barns; poultry house, 15x75; silo. Watered by well, spring and creek. Farm is 1 mile from Lake Ontario. Occupied by owner. Price asked is about what buildings cost. Price, \$100 per acre. Terms, $\frac{1}{2}$ down, balance on mortgage. Address F. L. Mixer, owner, Red Creek, N. Y.

WESTCHESTER COUNTY

Area, 463 square miles. Population, 321,713. Annual precipitation, 54.26 inches. Annual mean temperature, 50.1°. Number of farms, 1,880. County seat, White Plains.

This county is located in the southeastern part of the state and borders on Connecticut. It is bounded on the west by the Hudson River, on the southeast by Long Island Sound, is intersected by the Croton River and is drained in part by the Bronx River.

The surface is hilly and diversified. There are found several quarries of choice white marble and also quarries of domotite (magnesium limestone). The soil is fertile and adapted to pasturage. It consists chiefly of slaty, sandy and gravelly loam. Crops reported are: corn, 188,180 bushels; oats, 34,520 bushels; rye, 18,912 bushels; potatoes, 147,153 bushels; hay and forage, 52,252 tons; value of all farm

property, \$66,156,044, an increase of 117 per cent. during the past ten years. The average price of improved land in this county is \$434.73 an acre. Domestic animals reported are as follows: Dairy cows, 11,475; horses, 5,392; swine, 5,430; sheep, 1,140; poultry, 138,296; milk produced, 6,942,345 gallons; total receipts from the sale of dairy products, \$765,727.

The county is intersected by the New York, New Haven and Hartford; New York Central, main line, and Harlem and Putnam branch railroads. Many residents of New York City have beautiful villas and country seats in this county. It contains the city of Yonkers and the large villages of Peekskill, Ossining and White Plains. The southern part of the county comprising the populous villages of West Farms, Kings Bridge, Morrisania was annexed to New York City some years ago. White Plains is only 22 miles from the Grand Central Depot, New York City, and contains Alexander Institute which has more than a local reputation. Several celebrated academic and military high schools are located in this county and there are 122 district schools. There is but one creamery in the county as most of the milk produced is shipped directly to New York City. Agricultural societies of the county are represented by 1 cooperative association; 2 granges; a farmers' club; a horticultural society, and a county agricultural society.

TOWN OF YORKTOWN

Population 2,431

No. 550.—Farm of 175 acres; located 1 mile from P. O.; 3 miles from railway station at Yorktown, on line of N. Y. C. R. R., Putnam Division; 1 mile from school and churches and 3 miles from milk station. Highways, state and dirt roads. Nearest village, Peekskill, population 15,502, 6 miles distant, reached by highway. General surface, rolling. Altitude, 800 feet. Nature of soil, loam. Acres that can be used as meadow, 100; in natural pasture, 50; in timber, 25, hardwood, oak and hickory. Fruit, apples, pears, plums and quinces. Acres tillable, 100. Adapted to vegetables, grains and hay. Fences, stone and rail, fair condition. 15-room house, good condition. Outbuildings, cow barn, horse barn, ice house, granary, pig house and carriage house. Watered, house, by cistern and well; barns, by well, and fields, by brook and springs. Occupied by tenant. Reason for

selling, wish to retire. Price, \$20,000. Terms, easy. Address I. W. Winterburn, 104 Riverside Drive, New York, N. Y.

No. 551.—Farm of 130 acres; located 2½ miles from Yorktown Heights on line of N. Y. C. R. R., Putnam Division; 1 mile from school; 2 miles from churches and 2½ miles from milk station. Highways, state road. Nearest city Peekskill, population 15,502, 6 miles distant, reached by highway. General surface, rolling. Nature of soil, rich loam. Acres that can be used as meadow, 65; in timber, 4, hardwood. Acres tillable, 75. Fruit, apples, pears, peaches and plums. Adapted to corn, wheat, oats and potatoes. Fences, stone, in fair condition. House, 12 rooms, in good condition. Outbuildings, dairy barn for 20 cows, carriage house, hay barn, ice house and poultry house. Watered, house, by well and cistern; barns, by well, and fields, by springs. Occupied by owner's son. Reason for selling, poor health. Price, \$19,000. Terms: part cash. Address George B. Fowler, owner, Yorktown Heights, N. Y.

WYOMING COUNTY

Area, 606 square miles. Population, 33,028. Annual precipitation, 48.32 inches. Annual mean temperature, 46.6°. Number of farms, 3,529. County seat, Warsaw.

This county is situated in the western part of the state, is drained by Allens, Cattaraugus and Tonawanda Creeks and is bounded on the south by the Genesee river.

The surface is undulating and quite extensively covered with woodland. Devonian sandstone and shale underlie a large part of this county and extensive salt beds are also found, from which are taken large quantities of salt of excellent quality. In the southern part of the county, the soil on the upland is gravelly loam and heavy clay; in the valleys, a gravelly loam is found which is excellent for pasturage. In the northern part a heavy clay and gravelly loam resting on limestone predominates. Crops reported are as follows: Corn, 109,500 bushels; oats, 915,608

bushels; wheat, 254,788 bushels; buckwheat, 108,237 bushels; dry beans, 194,015 bushels; potatoes, 1,493,071 bushels; hay and forage, 142,315 tons. The average price of farm land per acre is \$28.99, an increase of \$5.59 per acre over 1900. Domestic animals are dairy cows, 28,066; horses, 11,732; swine, 10,487; sheep, 24,531; poultry, 158,211; milk produced, 14,033,000 gallons, the sale of which amounted to \$1,340,704. In the southeast corner of the county, the Genesee River flows between perpendicular cliffs 350 feet high. There are several picturesque cataracts known as the Falls of Genesee, one of which is 110 feet in height.

The county is intersected by the Erie; Buffalo, Rochester and Pittsburg, and the Batavia, Attica and Arcade railroads and is connected with Rochester by the Genesee Valley Canal. Cheap, easy and quick transportation to the great markets of Buffalo and Rochester show the advantages of this location. A union school located at Warsaw and a collegiate institute located at Attica with graded schools in villages and 168 district schools place the county high among the counties of the state in educational lines. There are 36 milk stations and factories in the county; 23 miles of state and county roads and 806 miles of graded and improved highways. The agricultural organizations are 2 fair societies, 12 granges and a Pomona grange.

TOWN OF ARCADE

Population 2,479

No. 552.—Farm of 35½ acres; located 2 miles from Chafee P. O. and railway station on line of Pa. R. R.; 1 mile from school; 2 miles from churches, cheese factory and milk station. Highways, good. Acres tillable, all. Fruit, apples, plums and cherries. Fences, wire, good. House recently remodeled, 9 rooms. 2 barns, in fair condition. Watered, house, by pump; fields, by creek. Occupied by owner. Reason for selling, ill health. Price, \$3,000. Full particulars given upon application to A. J. Crannell, owner, Chafee, Erie Co., N. Y.

TOWN OF EAGLE

Population 1,189

No. 553.—Farm of 220 acres; located 4 miles from Bliss P. O., R. D. No. 2 and railway station on line of B., R. & P. R. R.; ¼ mile from school; 2 miles from churches and butter and cheese factory; 2½ miles from condensing plant. Nearest large village, Warsaw, population 3,424, 14 miles distant, reached by rail or highway. General surface, level. Altitude, 1,800 feet. Acres in meadow, 100; in pasture, 45; in timber, 75, beech, maple and hemlock. Fruit, for home use. Best adapted to beans, hay and grain. Fences, mostly wire, in good condition. House, double, good condition. Outbuildings: barn, large gambrel roof, with silo, large poultry house and hog house. House watered by well and cistern; fields by springs. Occupied by owner. Reason for selling, other business. Price, \$35 per acre. Terms, \$3,000 cash, balance at 5%. Address W. B. Kerr, owner, Pike, N. Y.

TOWN OF GENESEE FALLS

Population 615

No. 554.—Farm of 174 acres; located 2½ miles from Castile P. O., R. D. 3; 2 miles from South Castile railway station on line of Erie R. R.; 3 miles from churches; 80 rods from school; 2 miles from cheese factory. Nearest large village, Warsaw, population 3,424, 12 miles distant, reached by rail and highway. Surface of farm, level and rolling. Altitude, 1,200 feet. Good soil. Acres in meadow, 30; in natural pasture, 10; in timber, about 30, beech, maple, hemlock, chestnut and pine. Nearly all tillable. Fruit, apples. Adapted to wheat, oats, buckwheat, beans, potatoes, etc. Fences, mostly wire. House, upright, 2 stories, wing, 1½ stories. Outbuildings: large barn, 30x85, nearly new, with carriage house, 16x26; cow stable, 18x32. Watered by spring and brook. Occupied by owner. Price, \$85 per acre. Terms, one-half or more down, remainder on mortgage. Address Miss Mary L. Smith, owner, Castile, N. Y., R. D. 3.

TOWN OF WETHERSFIELD

Population 805

No. 555.—Farm of 144 acres; located 5 miles from Bliss P. O., R. D. No. 2 and railway station on line of B. R. P. R. R.; ½ mile from school; ½ mile from churches; 2 miles from butter and cheese factory; 5 miles from milk station and condensing plant. Highways, state road, ½ mile distant. General surface, rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, 40; now used as meadow, 20; in natural pasture, 27; in timber, 40, maple, beech, basswood and cherry. Acres tillable, 75.

Fruit, apples and pears, very little. Adapted to grain, potatoes, beans and hay. Fences, good. 7-room house, good condition. Outbuildings, gambrel roof barn, 40x60, with basement; silo, concrete floor, with patent stanchions.

Watered, house, by well; barns, by spring; and fields, by spring. Occupied by tenant. Reason for selling, to settle an estate. Price \$4,500. Terms, \$2,000 cash, balance on mortgage. Address Fred B. Luce, owner, Johnsburg, N. Y.

YATES COUNTY

Area, 340 square miles. Population, 18,841. Annual precipitation, 31.75 inches. Annual mean temperature, 46.8°. Number of farms, 2,288. Average value of farm lands per acre, \$66.03. County seat, Penn Yan.

This county is located in the west central part of the state, in the "Finger Lake" district. Seneca Lake forms its eastern boundary, Canandaigua Lake its western, and Lake Keuka partly intersects it from the south.

The surface features of the county are marked by a series of five gently sloping ridges running north and south.

The soil consists of a fine quality of gravelly loam intermixed with clay and the disintegrated shales of the Portage group, and is particularly well adapted to pasturage, tillage or fruit growing. Among the valuable rocks that underlie the soil are Portage sandstone and Tully limestone. The county is well watered by streams, springs, lakes and ponds.

Ash, beech, elm, hickory, oak and maple are the leading trees of the woodlands.

Domestic animals are reported on 2,139 farms as follows: Dairy cows, 5,566; horses, 7,270; swine, 7,884; sheep, 36,554; poultry, 125,644. The number of farms reporting dairy cows was 1,907 and their total production of milk was 2,677,246 gallons. Total receipts from the sale of dairy products was \$156,044.

Yates is the second grape and wine producing county in the state. The first champagne produced in the United States was made in Yates County and this industry has steadily progressed until to-day it exceeds any other county in the United States in this production. The county is well equipped with transportation facilities, good roads, steam and electric lines. Buffalo, Philadelphia, New York, Syracuse, Rochester and other centers of population afford ample markets outside the county for all products of farm, garden, orchard and vineyard.

Educational advantages are of the best, there being, in addition to the many graded, high and academic schools, 104 school districts in the county.

Agricultural organizations comprise a county fair association, Yates County Agricultural Society and nine granges.

TOWN OF JERUSALEM

Population 2,424

No. 556.—Farm of 46 acres; 1½ miles from Keuka Park; 6 miles from railway station at Penn Yan on line of N. Y. C. R. R. Nearest large village, Penn Yan, population 4,725, distant 5 miles. Highways, first class. Acres in meadow, 2; acres tillable, 43; acres in natural pasture, 3; acres timber, 3. Fruit, 24 acres of grapes in bearing; 8 acres, 7 and 8 year old grapes in bearing; 5 acres peaches; 2 acres plums, all in fine condition. Occupied by owner. Fences around pasture. House, 2 stories, 30x40, in fair condition. Outbuildings: barn, 20x30, in fair condition; ice house and poultry house. Watered, house, by well and cistern; barns, by spring. This farm is located on lakeside with frontage of 1,500 feet on lake shore and within 1½ miles of Keuka College. Reason for

selling, advanced age of owner. There are several cottage sites on the lake shore. For price and terms, address R. F. Scofield, owner, Penn Yan, N. Y.

TOWN OF MIDDLESEX

Population 1,133

No. 557.—Farm of 124 acres; located ½ mile from Rushville P. O., R. D. 23, and railway station on line of Lehigh Valley Ry.; 1 mile from school and churches. Highways, good. Surface of farm, part level and part rolling. Altitude, 670 feet. Soil, clay loam, some gravel. Acres in meadow, 20; in alfalfa, 25. All tillable. Fruit, apples, 125 trees. Adapted to corn, beans, wheat, barley, hay, oats, alfalfa, etc. Fences, woven wire, good condition. House, 12 rooms, good condition. Outbuildings, barn, 32x100; barn, 34x84; poultry house; new hog house, etc. Watered by well, spring and creek, piped to barn and

FIG. 71.— BUILDINGS ON FARM NO. 554, TOWN OF GENESEE FALLS, WYOMING
COUNTY.



house. Occupied by owner. Reason for selling, ill health. Price, \$14,000. Terms, one-third cash, balance on bond and mortgage at 5 %. Address Wm. H. Savage, owner, Rushville, N. Y. There is a natural gas well on farm, which furnishes light and heat, under full control of owner.

TOWN OF STARKEY

Population, 2,656

No. 558.— Farm of 64 acres; located $4\frac{3}{4}$ miles from Dundee P. O., on line of N. Y. C. R. R.; 1 mile from school and $4\frac{3}{4}$ miles from churches, cheese factory and condensing plant. Highways, state road. Nearest village, Dundee, population 1,236, $4\frac{3}{4}$ miles distant, reached by

highway. General surface, sloping. Altitude, 1,000 feet. Nature of soil, clay loam and muck. Acres that can be used as meadow, any part; in natural pasture, 2; in timber, 6, maple, beech, oak, basswood and pine. Fruit, about 90 apple trees and $1\frac{1}{2}$ acres of black raspberries. Adapted to beans, hay, raspberries and wheat. Fences, mostly woven wire. House, 8 rooms, in good condition. Outbuildings, barn, 36x60, built in 1912; concrete floor in cow and horse stables, hog house and poultry house. Watered, house and barns, by well. Occupied by tenant. Reason for selling, other business. Price, \$4,800. Terms, \$2,000 cash and remainder on mortgage. Address J. M. Ovenshire, owner, Dundee, N. Y.

STATE OF NEW YORK
DEPARTMENT OF AGRICULTURE

CHARLES S. WILSON, Commissioner

Bulletin 91

Owners of
Pure-Bred Live Stock
in
New York

CONTENTS

	PAGE
Introductory statement	317
General live stock — List of associations.....	320
Horses — List of associations.....	323
Belgian Draft	327
Clydesdale	327
French Coach	327
German Coach	328
Hackney	328
Percheron	328
Saddle	336
Shire	336
Suffolk	336
Thoroughbred	339
Trotter	339
Morgan	340
Ponies — Exmoor	340
Hackney	340
Shetland	340
Welsh	343
Asses	343
Cattle — List of associations.....	347
Aberdeen-Angus	349
Ayrshire	349
Brown Swiss.....	357
Canadian	358
Columbian	358
Devon	358
Dexter	358
Dutch Belted.....	358
Galloway	358
Guernsey	361
Hereford	370
Holstein-Friesian	371
Jersey	436
Polled Jersey.....	446
Red Polled.....	447

	PAGE
Cattle — Shorthorn	447
Dairy Shorthorn.....	448
Polled Durham.....	448
Sheep — List of associations	453
Black Faced Highland.....	457
Cheviot	457
Cotswold	458
Dorset Horn.....	458
Hampshire Down.....	461
Karakul	462
Persian Fur	462
Shiraz-Kreminer	462
Leicester	462
Lincoln	462
Merino, American.....	467
Black Top Spanish.....	467
Delaine	467
Rambouillet	467
Oxford Down.....	467
Shropshire	468
Southdown	472
Suffolk Down.....	472
Tunis	475
Goats — Angora	475
Milch	475
Swine — List of associations	479
Berkshire	481
Cheshire	486
Chester White.....	486
Chester White (O. I. C.)	487
Duroc-Jersey	491
Essex	492
Hampshire	492
Mulefoot	492
Poland China.....	492
Suffolk	495
Tamworth	495
Victoria	495
Yorkshire (large)	495
Yorkshire (small)	495

ILLUSTRATIONS

	PAGE
Fig. 1. Two-year-old Belgian fillies.....	326
Fig. 2. Clydesdale stallion, Gertly Pride.....	329
Fig. 3. French Coach stallion, Paladea.....	329
Fig. 4. German Coach mare, Alemania.....	330
Fig. 5. Hackney stallion, Romping Hash.....	330
Fig. 6. Percherons exhibited at New York State Fair.....	333
Fig. 7. Saddle horse, Dainty Peanine.....	334
Fig. 8. Shire stallion, Chuldwick.....	334
Fig. 9. Suffolk stallions, one year old.....	337
Fig. 10. Prize-winning two-year-old thoroughbred.....	337
Fig. 11. Trotter exhibited at New York State Fair.....	338
Fig. 12. Morgan stallion, Morrill Lambert 6569.....	338
Fig. 13. Shetland pony	341
Fig. 14. Poitou jack	342
Fig. 15. Ayrshires shown at New York State Fair.....	351
Fig. 16. Aberdeen Angus shown at New York State Fair.....	352
Fig. 17. Brown Swiss cow, Constance 3689.....	352
Fig. 18. Canadian bull shown at New York State Fair.....	359
Fig. 19. Devon cow	359
Fig. 20. Dutch Belted cattle shown at New York State Fair.....	360
Fig. 21. Guernsey cow, Linden Girl 42762.....	365
Fig. 22. Hereford bull	372
Fig. 23. A group of Holsteins.....	372
Fig. 24. A group of Jerseys.....	439
Fig. 25. Shorthorn bull	449
Fig. 26. Black Faced Highland.....	456
Fig. 27. Cheviot ewes in a farm flock.....	459
Fig. 28. Cotswold — Champion at New York State Fair.....	460
Fig. 29. Dorset ewe	460
Fig. 30. Yearling Hampshire ram.....	463
Fig. 31. Imported Karakul ram, Alec — Fur type.....	463
Fig. 32. Border Leicester yearling ewe.....	464
Fig. 33. Lincoln sheep	464
Fig. 34. Delaine ewe	465
Fig. 35. Merino ram, Gold Coin, jr.....	465
Fig. 36. Rambouillet ewe	466
Fig. 37. A typical Oxford Down.....	466

	PAGE
Fig. 38. Shropshire shearling ram.....	469
Fig. 39. Yearling Southdown ram.....	469
Fig. 40. Suffolk Down	470
Fig. 41. Tunis ram, Guilliams Pride 2503.....	470
Fig. 42. Angora goats on farm of Jesse F. Snow.....	473
Fig. 43. Typical buck and doe of Saanen milch goat.....	474
Fig. 44. Berkshires	483
Fig. 45. Cheshire sow	483
Fig. 46. Chester White sow and pigs.....	484
Fig. 47. Two-months-old O. I. C. sows.....	484
Fig. 48. Duroc-Jersey sow	489
Fig. 49. Essex boar	489
Fig. 50. Hampshire boar	490
Fig. 51. Mulefoot sow	490
Fig. 52. Poland China sow.....	493
Fig. 53. Tamworth sow	493
Fig. 54. Typical Yorkshire sow.....	494
Fig. 55. Prize-winning Small Yorkshire boar.....	494

INTRODUCTORY STATEMENT

In the following pages of this bulletin will be found the names and addresses of practically all of the owners of registered live stock in this state, and the number of animals of each breed. The increase in pure-bred live stock in New York State has been rapid in recent years and has resulted in great improvement and benefit to that industry, and especially to the dairy interests of this state.

Since the publication of the last bulletin of "Owners of Pure-Bred Live Stock in New York" in 1912, the number of registered animals of the dairy breeds has greatly increased. There are now listed approximately

- 50,000 head of registered Holsteins
- 4,000 head of registered Ayrshires
- 4,000 head of registered Guernseys
- 6,000 head of registered Jerseys

There are also a considerable number of registered animals representing the less numerous dairy and beef breeds in this state. The registered swine industry has also made a very decided advance and that of registered sheep has made progress. Less interest has been manifested in registered horses.

One of the decided benefits that is particularly noticeable during the last decade is the increase in production of milk. This increase has been shown by cow-testing associations in the state to be nearly, if not quite, 1,000 pounds of milk per cow.

The greater value of registered animals and the increased value in production has caused this industry to become general throughout the state instead of being localized as formerly, and at this time all counties of the state are represented by registered animals of the very best breeding.

This bulletin will be found particularly useful to those desiring to purchase registered live stock and the publication of the names and addresses of the owners of such stock adds much to the con-

venience in finding and reducing the cost of transportation, as purchasers are generally able to find such stock within short distances of their places of residence.

An effort has been made by this department to secure the names and addresses of all breeders who might have registered live stock, some of which might be for sale. Undoubtedly errors and omissions will be found in the work, and this department would be glad to have the names and addresses of persons who have been overlooked, in order to correct such omissions in future bulletins and make them, as far as possible, fully representative.

The department would especially request all intending purchasers to correspond with the breeders whose names are contained in this bulletin, as they are sure to find within the borders of this state the very highest types of the various breeds of live stock, and at the same time secure strong, healthy animals, raised under ideal conditions of climate, and under the careful inspection of the State Department of Agriculture.

This department wishes particularly to call the attention of those desiring to engage in the live stock industry to the superior advantages offered by the productive, well-improved, low-priced farm lands of this state, which are especially adapted to this industry. We have here a population of 10,000,000 people, 80 per cent of whom reside in the cities and villages of the state, and who furnish the best of home markets to the surrounding country. Crop failure is practically unknown in this state and the soil is particularly adapted to the production of the various grasses, grains, and forage grown in this latitude. At the same time, we believe, farm lands are offered at lower prices, considering their actual value, than in any other portion of this country.

The reports of the Federal Department of Agriculture show that the state of New York produces on the average a greater quantity per acre, and of much greater value, than many of the states where farm lands are held at prices double those prevailing in this state. All conditions necessary to make the live stock industry a great success can be found on a large proportion of the farms of this state, and it is the desire and purpose of this department to assist, as far as possible, those wishing to engage

in this industry, thereby increasing agricultural production and adding to the material prosperity of the state and country. To this end we invite your correspondence and promise you our best endeavors in assisting you to find suitable locations in which to raise live stock successfully, or to engage in general agriculture.

This bulletin is intended for free distribution and will be forwarded promptly to those desiring copies and we would be grateful for the names of any who might be interested.

CHARLES S. WILSON,
Commissioner of Agriculture.

Compiled by
CHARLES W. LARMON,
Chief, Bureau of Statistics.

NOTE—For convenience in reference, the breeds of live stock are arranged in alphabetical order in four principal groups.

GENERAL LIVE STOCK

STATE AND COUNTY ASSOCIATIONS

New York State Breeders' Club

A. L. Brockway, secretary, Syracuse, N. Y.

Clinton County Breeders' Association

Wallace Turner, secretary-treasurer, Schuyler Falls, N. Y.

Montgomery County Breeders' Club

Roy P. Runkel, secretary, Johnstown, R. D. 1, N. Y.

Schoharie County Breeders' Association

S. G. Judd, secretary, Cobleskill, N. Y.

Tompkins County Breeders' Association

C. O. Carman, secretary, Trumansburg, N. Y.

HORSES

[321]

III — 11

HORSES

NATIONAL ASSOCIATIONS

Arabian

The Arabian Horse Club of America

H. K. Bush-Brown, secretary-treasurer, 1729 G St., Washington, D. C.

Belgian Draft

The American Association of Importers and Breeders of Belgian Draft Horses

J. D. Connor, jr., secretary-treasurer, Wabash, Ind.

Cleveland Bay

Cleveland Bay Society of America

R. P. Stericker, secretary, Chicago, Ill.

Clydesdale

The American Clydesdale Association

P. E. Fleming, secretary, Union Stock Yards, Chicago, Ill.

French Coach

French Coach Horse Society of America

Duncan E. Willett, secretary-treasurer, Oak Park, Ill.

French Draft

National French Draft Horse Association

C. E. Stubbs, secretary, Fairfield, Ia.

German, Hanoverian, and Oldenberg Coach

German, Hanoverian and Oldenberg Coach Horse Association of America

J. Crouch, secretary-treasurer, LaFayette, Ind.

Hackney

American Hackney Horse Society

Gurney C. Gue, secretary-treasurer, 460 Fulton Ave., Hempstead, N. Y.

Morgan

American Morgan Registry Association

Thomas E. Boyce, secretary, Middlebury, Vt.

Percheron

The American Breeders and Importers Percheron Registry Company

John A. Forney, secretary-treasurer, Plainfield, O.

Percheron Society of America

Wayne Dinsmore, secretary, Chicago, Ill.

American Saddle

American Saddle Horse Breeders' Association

Roger H. Lillard, secretary, 434 West Main St., Louisville, Ky.

Shire

The American Shire Horse Association

Chas. Burgess, secretary, Wenona, Ill.

Suffolk

American Suffolk Horse Association

A. Graham Galbraith, secretary, De Kalb, Ill.

Thoroughbred

The Jockey Club

H. K. Knapp, secretary, 18 East 41 St., New York, N. Y.

Trotter

American Trotting Register Association

W. H. Knight, secretary-treasurer, 137 South Ashland Blvd., Chicago, Ill.

ASSES

American Breeders' Association of Jacks and Jennets

J. W. Jones, secretary, Columbia, Tenn.

PONIES**Shetland**

American Shetland Pony Club

J. M. Wade, secretary-treasurer, LaFayette, Ind.

Welsh

The Welsh Pony and Cob Society of America

J. M. Wade, secretary-treasurer, LaFayette, Ind.

FIG. 1.—TWO-YEAR-OLD BELGIAN FILLIES. IMPORTED AND OWNED BY ADIRONDACK FARMS,
GLENB FALLS, N. Y.

HORSES

BELGIAN DRAFT

County in which stock is located	Owner	Address	Number of animals
Allegany.....	Swain, W. E.....	Swain.....	2
Broome.....	Horton, E. E.....	Johnson City.....	4
	Marean, A. D.....	Union, R. D. 1.....	1
Cayuga.....	Doremus, Geo. S.....	Merrifield.....	2
	Marshall, Wm.....	Aurora.....	6
Chautauqua.....	Hall, J. E.....	Westfield.....	9
Clinton.....	Heart's Delight Farm.....	Chazy.....	32
	Lapham, E. N.....	Peru.....	5
	Miner, W. H. (See Heart's Delight Farm)		
	Smith, F. L.....	East Beekmantown.....	1
Cortland.....	Kellogg, O. U.....	Cortland.....	4
Dutchess.....	Bradley, Chas. R.....	Poughkeepsie.....	1
Erie.....	Dennison, Lewis O.....	Buffalo.....	*30
Essex.....	Harlan, Jas. S.....	Essex.....	1
	Moses, Frank M.....	Ticonderoga.....	1
Herkimer.....	Shimel, W. E.....	Mohawk, R. D.....	1
Madison.....	Morse, J. Grant.....	Hamilton.....	1
	Owens, Glenn D.....	Morrisville.....	1
Monroe.....	Carl, Earl A.....	Henrietta.....	3
Onondaga.....	Akin, E. S.....	Syracuse.....	15
	Dawley, F. E.....	Fayetteville.....	6
Ontario.....	Earing, Mark.....	Geneva, R. D. 5.....	1
Orleans.....	Sparks, George H.....	Holley.....	1
St. Lawrence.....	Woodcock, W. S.....	Edwards.....	5
Steuben.....	Bailey, Leslie.....	Bath.....	3
Wayne.....	Merriam, C. C.....	Sodus.....	12
Yates.....	Enos, Harry.....	Penn Yan, Route 7.....	2

CLYDESDALE

Cattaraugus.....	Merrill, Lee L.....	S. Dayton.....	1
Otsego.....	Wardwell, Henry L.....	Springfield Center.....	5
St. Lawrence.....	Coonradt, B. F.....	Brier Hill.....	1
Westchester... ..	Chisholm, Hugh J.....	Port Chester.....	6
	(Strathglass Farm)		
	Strathglass Farm (See Chisholm, Hugh J.)		

FRENCH COACH

Chemung.....	Edsall, J. B.....	Pine City.....	1
Madison.....	Dwight, P. L.....	De Ruyter.....	1

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
GERMAN COACH			
Montgomery.....	Vanderveer Bros.....	Fultonville.....	1
HACKNEY			
Clinton.....	Heart's Delight Farm..... Miner, W. H. (See Heart's Delight Farm)	Chazy.....	3
Genesee.....	Clark, Stephen.....	Batavia.....	5
Kings.....	Willis, Harrison, M.D.....	Cropsey and 23d Avenue, Brooklyn.....	3
Monroe.....	Clover Heights Farm (See Jones, Lewis B.) Jones, Lewis B..... (Clover Heights Farm)	Pittsford.....	5
Onondaga.....	Gillis, A. R.....	Syracuse.....	10
Ontario.....	Newman, Ray C.....	Phelps.....	2
Oswego.....	Tucker, E. B.....	Hannibal.....	1
Rensselaer.....	Butler, H. H.....	Averill Park.....	16
St. Lawrence.....	Allison's Island Farm and Allison, J. W.....	Waddington.....	*10
Schoharie.....	Schuyler, James E.....	Cobleskill.....	2
Tompkins.....	Allen, F. R..... Cornell University.....	Ithaca..... Ithaca.....	4 1
Washington.....	Smith, Alfred H.....	Smiths Basin.....	1
PERCHERON			
Albany.....	Filkins, Avery C.....	Westerlo.....	2
Allegany.....	Hanks, Otis..... Hewitt, Jesse..... Howe, A. D..... James, E. T., & Son..... Karr, S. S., & Son..... Morton, M. S..... Swain, W. E..... Wingert, J. H..... Williams, Daniel H..... Witter, E. H..... Woodworth, E. E.....	Friendship..... Cuba..... Whitesville..... Cuba, R. D. 5..... Almond..... Angelica..... Swain..... Caneadea..... Houghton..... Cuba..... Alfred.....	4 1 1 3 3 3 1 4 4 2 3
Broome.....	Shufelt, Lorenzo.....	Windsor.....	1
Cattaraugus.....	Allen, B. H..... Cleveland, Arthur E..... Haase, A. V..... Jones, W. W..... Martin, W. P., & Son..... Parmelee, John M..... Strickland Horse Farm.....	Dayton..... Olean..... Allegany..... Dayton..... Delavan..... Dayton..... Cattaraugus.....	3 1 *4 4 6 8 2

* Including pure-breds not registered.

FIG. 2.—CLYDESDALE STALLION, GERTLY PRIDE, PRIZE-WINNER IN SCOTLAND, OTTAWA, TORONTO, NEW YORK AND CHICAGO.

FIG. 3.—FRENCH COACH STALLION, PALADRA.

FIG. 4.—GERMAN COACH MARE, ALEMANIA.

FIG. 5.—HACKNEY STALLION, ROMPING HASH.
(Courtesy of "The Field")

County in which stock is located	Owner	Address	Number of animals
Chautauqua.....	Crandall, John M.....	Jamestown, R. D. 83.....	1
	Cross, O. E.....	Niobe.....	6
	Merz, Frank.....	Jamestown.....	7
Chemung.....	Edsall, J. B.....	Pine City.....	1
	Parke, David J.....	Van Etten.....	5
	Rosekrans, C. J.....	Erin.....	1
	Sherman, Erie M.....	Elmira, R. D. 6.....	1
Chenango.....	Gage, Linn R.....	So. New Berlin.....	1
	Tarbell, Gage E..... (Tarbell Farms)	Smithville Flats.....	7
Cayuga.....	Davis, J. W. & A. A.....	Groton.....	2
	Lake View Stock Farm.....	Union Springs.....	1
	Matson, Oscar.....	Locke.....	2
	Mosher, Gail W.....	Union Springs.....	1
Clinton.....	Heart's Delight Farm.....	Chazy.....	57
	Miner, W. H. (See Heart's Delight Farm)		
Cortland.....	Bisworth, W. J.....	Cuyler.....	1
Delaware.....	McClintock, S. C.....	Franklin.....	1
Dutchess.....	Flanigan, Peter, jr.....	Amenia.....	1
	Ham, Eugene.....	Verbank.....	8
	Ham, John M.....	Milbrook.....	3
	Risk, James.....	Hopewell Junction.....	*8
Erie.....	Boardway, M. H.....	Lawton.....	1
	Clark, Milton.....	North Collins.....	1
	Foss, Elmer.....	South Wales.....	2
	Kelkenburg, Charles.....	Clarence Center.....	5
	Kellogg, Spencer.....	Derby.....	1
	Martin Bros.....	Clarence Center.....	4
	Plumb, Ralph.....	Buffalo.....	4
	Taylor, Clayton C.....	Lawtons.....	3
	Urban, George P.....	Pine Ridge, Buffalo.....	8
Essex.....	Bigelow, F. E.....	Whallonsburg.....	4
	Lake Placid Co.....	Lake Placid Club.....	1
Franklin.....	Russell, H. A.....	Bombay.....	2
Genesee.....	Chapin, R. E., & Son.....	Batavia.....	12
	Chappel, P. M.....	220 Warwick Ave., Roch- ester.....	7
	Hillman, Wm. M.....	East Bethany.....	3
	Miller, Geo. W. & Chas. P..	South Byron.....	16
	Walker, Truman A.....	Bergen.....	2
	Winter, Charles.....	Linden.....	1
Herkimer.....	Burke, John.....	Ilion.....	1
	Jones, Clarence D.....	Little Falls.....	1
Jefferson.....	Maxwell, M. J.....	Adams.....	1
	Patrick, H. S.....	Adams.....	7

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Lewis.....	Schantz, A. E.....	Lowville, R. D. 1.....	1
	Virkler, C. F.....	Lowville.....	12
	Virkler, Wm. F.....	Carthage.....	5
Livingston.....	Donnan, Geo. S.....	Linwood.....	1
	Gray, G. F., & Son.....	Lima.....	15
	Johnson, A. B.....	Caledonia.....	24
	McKenzie, Duncan.....	Linwood.....	*3
	Noonan, James.....	Avon.....	7
	Sage, Elmer F.....	Avon.....	1
	Wadsworth, J. W.....	Geneseo.....	1
Madison.....	King, Henry T.....	Chittenango.....	3
	State School of Agriculture..	Morrisville.....	1
	Wightman, Benjamin J....	West Eaton.....	1
Montgomery.....	Dievendorf, A. H.....	Sprakers.....	4
	Fahey, Philip, jr.....	Amsterdam.....	1
	Greene, Francis L.....	Amsterdam.....	*2
	Romeyn, J. Edwin.....	Amsterdam, R. D. 6.....	1
	Bennett, C. W.....	Hilton.....	*2
Monroe.....	Habecker Bros.....	Mendon.....	8
	Harris, Geo. H.....	Fairport.....	3
	Martin, Pryor F.....	West Henrietta.....	2
	Martin, R. Bly.....	West Henrietta.....	2
	Mattison, L. O.....	Chili Station.....	1
	Vink, C., & Son.....	Churchville.....	1
	Waner, J. Burton.....	919 Culver Rd., Rochester..	3
	Wingate, F. G.....	Churchville.....	1
	Woolston, Clare C.....	Pittsford.....	2
	Hoefert, Henry C. F.....	North Tonawanda.....	2
Niagara.....	Williams, August H.....	La Salle.....	4
	Comstock, W. G.....	Clinton.....	2
Oneida.....	Jewett, C. H., & Son.....	Oriskany Falls.....	1
	Kenotin Farm.....	Washington Mills.....	2
	Rathbun, F. G.....	Verona.....	2
	Smith, M. B.....	Rome.....	1
	Akin, E. S.....	Syracuse.....	25
Onondaga.....	Bowen, Edgar.....	Jamesville, R. D. 1.....	2
	Brown, W. S., & Sons.....	Elbridge.....	2
	Melvin, R. C.....	Liverpool.....	6
	Pendergast, S. W.....	Phoenix.....	3
	Smith, Ambrose E.....	Camillus.....	8
	Dean, Irving.....	Geneva.....	1
	Francis, R. H.....	Honeoye.....	3
	Hamlin, Geo. D., M. D....	1259 Pacific St., Brooklyn..	10
	(Farm at Naples)		
	Long, Frances R. C.....	Naples.....	2
Ontario.....	Pennell, Wm. T.....	Honeoye.....	4
	Ritter, Sidney A.....	Geneva.....	1

* Including pure-breds not registered.

FIG. 6.—PERCHERONS EXHIBITED AT NEW YORK STATE FAIR.

FIG. 7.—SADDLE HORSE, DAINTY PEANINE, BY GOLDEN KING
OUT OF BETTY HACKADAY BY REX PEANINE.

FIG. 8.—SHIRE STALLION, CHULDWICK, CHAMPION AT THE LONDON SHIRE
HORSE SHOW, 1914.
(Courtesy of Sanders Publishing Co., Chicago, Ill.)

County in which stock is located	Owner	Address	Number of animals
Orange.....	Hill, Charles B.....	Montgomery.....	2
	Nickerson, Edwin.....	Middletown.....	1
	Tener, H. E.....	Washingtonville.....	6
Orleans.....	Love, Darwin J.....	Holley.....	2
Oswego.....	Jarrett, L. D.....	New Haven.....	1
	Soulé, F. C., & Sons.....	Cleveland.....	1
	(Vanderkamp Farms)		
	Vanderkamp Farms (See Soulé, F. C., & Sons)		
Otsego.....	Hillis, A. W.....	South Worcester.....	5
	Rowe, Luman F.....	Milford.....	4
Rensselaer.....	Breese, Chas. A.....	Hoosick Falls.....	3
	Hayner, B. W.....	Troy, R. D. 5.....	1
	Herrington, Nathan W.....	Hoosick Falls.....	1
	Yates, Chas.....	Schaghticoke.....	3
Rockland.....	Cutler, Otis H.....	Suffern.....	2
St. Lawrence.....	Allison's Island Farm and Allison, J. W.....	Waddington.....	4
	Clark, Geo. A.....	Plum Brook.....	2
	Martin, W. F.....	Brasher Falls.....	1
	Murphy, A. W.....	Hammond.....	4
	Patten Bros.....	Lawrenceville.....	3
	Porter, Will J.....	Lisbon.....	5
	Wallace, V. A.....	Lisbon.....	2
Saratoga.....	Davey, Schuyler.....	Ballston Spa.....	5
Schenectady.....	De Graff, A. J., & Son.....	Pattersonville.....	*4
Schoharie.....	Beard, Franklin P., M. D... Cornell, S. S.....	Cobleskill..... Jefferson, R. D. 1.....	6 1
	Vroman, M. J.....	Schoharie.....	13
Schuyler.....	Frost, Geo. A.....	Montour Falls.....	2
	Pinneer, C. V.....	Odessa.....	1
Seneca.....	Mellen, Chas. R.....	Geneva.....	2
Steuben.....	Brown, L. H.....	Hammondsport.....	1
	Dartt, Sterry F.....	Jasper.....	3
	Dennis, Leon S.....	Jasper.....	3
	Lewis, F. H.....	Prattsburgh.....	1
	Lewis, J. B.....	Prattsburgh.....	3
	Stephens, E. B.....	Canisteo, R. D.....	1
	Stewart, J. Henry.....	Kanona.....	1
	Sturdevant, J. B.....	Avoca.....	3
	Swan, T. O., & A. B.....	Jasper.....	26
	Wheeler, E. M.....	Kanona.....	4
Suffolk.....	Gould Bros.....	East Hampton.....	1
Sullivan.....	Proctor, Wm. Ross.....	Barryville.....	4
	Schick, Anthony.....	Obernburg.....	1
Tioga.....	Blewer, Fred A.....	Owego, R. D. 3.....	12
	Blewer Est., Geo. F.....	Newark Valley.....	2
	Meddaugh, P. C.....	Candor.....	2
	Personeus, Melvin.....	Candor.....	1
	Stetler, Lloyd.....	Barton.....	1

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Tompkins.....	Cornell University.....	Ithaca.....	11
	Hilsinger, Wm. B.....	McLean.....	1
	Mott, C. A.....	Freeville.....	1
	Mulvihill, Mrs. John.....	Brookton.....	*5
	Rumsey, Darwin.....	Newfield.....	6
Ulster.....	Boice, Burton A.....	West Shokan.....	1
	McCartney Bros.....	Ellenville.....	1
	Schoonmaker, Selah.....	Gardiner.....	1
Washington.....	McWhorter, Wm.....	Argyle.....	4
	Percheron Horse Co.....	Hudson Falls.....	1
	Thomson, H. L.....	Granville.....	3
	Wicks, Harry C.....	Fort Edward.....	3
	Wicks, Lemuel E.....	Fort Edward.....	3
Warren.....	Wieler, E. H., & Sons.....	Warren.....	2
Westchester.....	Campbell, Frank M.....	Valhalla.....	2
Wyoming.....	Cooper, Elmer W., & Son...	Perry.....	3
	Coxe, Huron A.....	Wyoming.....	1
	Humphrey, Geo. W.....	Warsaw.....	1
	Olin, O. V.....	Warsaw.....	2
	Tuttle, W. H.....	Perry.....	1
	Wright, R. J.....	Perry.....	1
Yates.....	Nutt, E. C.....	Dresden.....	1
	Watkins, Charles M.....	Penn Yan.....	1

SADDLE

Clinton.....	Heart's Delight Farm.....	Chazy.....	1
	Miner, W. H. (See Heart's Delight Farm)		
Nassau.....	Eldridge, Rowell.....	Great Neck.....	14
Onondaga.....	Dawley, F. E.....	Fayetteville.....	3
Orange.....	Ramsdell, J. A. P.....	Newburgh.....	12

SHIRE

Allegany.....	Swain, W. E.....	Swain.....	2
Cortland.....	Dain & Jenkins.....	Cortland.....	1
Orleans.....	Jeffrey, Geo. C.....	Albion.....	1
Steuben.....	Hopkins, Fred.....	Wallace.....	1

SUFFOLK

Albany.....	Whitney, C. L. A.....	Albany.....	4
Chenango.....	Phetteplace, Gurdon E.....	Norwich.....	7
Dutchess.....	Robinson, D. R.....	Fishkill Plains.....	1
Montgomery.....	Miller, John P.....	Amsterdam.....	1
	Rothemyer, Edw. Wm.....	Amsterdam, R. D. 3.....	3
Onondaga.....	Akin, E. S.....	Syracuse.....	20
	Amidon, Elmer E., sr.....	Marcellus.....	2
	Brown, Oscar J.....	Baldwinsville.....	6
Orange.....	Ramsdell, J. A. P.....	Newburgh.....	5
Tompkins.....	Allen, F. R.....	Ithaca.....	6

* Including pure-breds not registered.

FIG. 9.—SUFFOLK STALLIONS, ONE-YEAR-OLD WINNERS OF FOUR PRIZES
AND CHAMPIONSHIP AT THE NEW YORK STATE FAIR, 1914.

FIG. 10.—PRIZE-WINNING TWO-YEAR-OLD THOROUGHBRED.

FIG. 11.—TROTTER EXHIBITED AT NEW YORK STATE FAIR.

FIG. 12.—MORGAN STALLION. MORRILL LAMBERT 6569, A. M. R.
(*Courtesy of C. W. Halliday, North Chatham, N. Y.*)

THOROUGHBRED

County in which stock is located	Owner	Address	Number of animals
Dutchess.....	Huntington, R. P.....	Staatsburg.....	1
Nassau.....	Davis, Albert J.....	Jericho.....	9
	Ellis, Ralph.....	Jericho.....	1
Niagara.....	Rumsey, L. D.....	Youngstown.....	*13
Oswego.....	Jockey Club of New York..	Hannibal.....	1
	Ware, Dell (See Jockey Club of New York)		
Suffolk.....	Emmet, Devereux.....	St. James.....	1
Westchester.....	Muldoon, William.....	Purchase.....	4

TROTTER

Albany.....	Schifferdecker, Chas. F.....	126 Broad St., Albany.....	3
Clinton.....	Sterns, David.....	Plattsburgh.....	1
Columbia.....	Lampman, Frank.....	Ancram Lead Mines.....	*8
	Stickles, H. H.....	Claverack.....	3
Dutchess.....	Davis, W. H.....	Millbrook.....	2
	Feroe, H. C.....	Tivoli.....	9
	Fraleigh, H. D.....	Tivoli.....	1
Erie.....	Goodemote, J. P.....	Springville.....	5
	Urban, Geo. P.....	Pine Ridge, Buffalo.....	10
Essex.....	Sherman, George D.....	Port Henry.....	3
Greene.....	Bogardus, Herbert.....	Acra.....	2
Genesee.....	Hillman, Wm. M.....	East Bethany.....	1
Madison.....	Grems, Edward G.....	Canastota.....	2
Monroe.....	Kendall, Emerson.....	Churchville.....	1
Nassau.....	Craft, Harvey C.....	Glen Cove.....	1
	Ellis, Ralph.....	Jericho.....	1
	Nichols, John W. T.....	Cold Spring Harbor.....	2
Niagara.....	Williams, August H.....	La Salle.....	1
Cneida.....	Walsh, John, & Walsh Bros.	Clayville.....	1
Onondaga.....	Gillis, A. R.....	Syracuse.....	7
	Pendergast, S. C.....	Phoenix.....	1
Ontario.....	Long, Frances R. C.....	Naples.....	1
	Ritter, Sidney A.....	Geneva.....	1
Orange.....	De Vine, Dr. J. F.....	Goshen.....	3
	Falinghuysen, Theodore....	Tuxedo.....	2
	Schmid, Julius.....	Montgomery.....	3
	Todd, J. H. L.....	Bellvale.....	*14
	(Victor Farms)		
	Victor Farms (See Todd, J. H. L.)		
Orleans.....	Bush, Seth J. T.....	Morton.....	1
	Howes, A. C.....	Albion, Box 125.....	1
St. Lawrence.....	Allison's Island Farm and Allison, J. W.....	Waddington.....	4
Steuben.....	Aldrich, Mrs. Jennie.....	Bath.....	1

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Suffolk.....	Emmet, Devereux.....	St. James.....	1
Tioga.....	McLeese, J. C.....	Candor.....	*1
Tompkins.....	McLees, J. H.....	Ithaca.....	1
	Weatherby, J. C.....	Trumansburg.....	8
Ulster.....	McCartney Bros.....	Ellenville.....	1
Washington.....	Brown, Joseph.....	Ft. Edward.....	3
	Elmpines Farm. (See Sher- man, J. G.)		
	Higley, Albert M.....	Hartford.....	3
	Sherman, J. G..... (Elmpines Farm)	Greenwich.....	10

Morgan

Allegany.....	Sisson, Milton B.....	Almond.....	1
Chautauqua.....	Crandall, John M.....	Jamestown, R. D. 83.....	1
Columbia.....	Halliday, C. W.....	North Chatham.....	2
Essex.....	Phinney, Scott E.....	Wadhams.....	1
Greene.....	Bogardus, Herbert.....	Acra.....	5
Onondaga.....	Dawley, F. E.....	Fayetteville.....	2
Ontario.....	Pennell, Wm. T.....	Honeoye.....	1

PONIES

EXMOOR

Onondaga.....	Dawley, F. E.....	Fayetteville.....	2
---------------	-------------------	-------------------	---

HACKNEY

Cortland.....	Knapp, O. Arthur.....	Cortland.....	5
	Roselawn Pony Stud. (See Weaver, A. M.)		
	Weaver, A. M..... (Roselawn Pony Stud)	Cortland.....	20
Orange.....	Fletcher, Chas. W..... (Halcyon Farms)	Goshen.....	20
	Halcyon Farms. (See Flet- cher, Chas. W.)		

SHETLAND

Chautauqua.....	Merz, Frank..... (Sunnyside Farm, Sinclairville)	Jamestown.....	2
	Sunnyside Farm. (See Merz, Frank.)		
Chemung.....	Edsall, J. B.....	Pine City.....	6
Chenango.....	Hayden, Wm., & Son.....	McDonough.....	4
Cortland.....	Knapp, O. Arthur.....	Cortland.....	10
	Roselawn Pony Stud. (See Weaver, A. M.)		
	Weaver, A. M..... (Roselawn Pony Stud)	Cortland.....	30

* Including pure-breds not registered.

FIG. 13.—SHETLAND PONY.
(Courtesy of Dr. J. F. DeVinc, Gloster, N. Y.)



PONIES AND ASSES

343

County in which stock is located	Owner	Address	Number of animals
Erie.....	Urban, Geo. P.....	Pine Ridge, Buffalo.....	1
Jefferson.....	Converse, G. H.....	Woodville.....	1
Monroe.....	Hawley, Mrs. E. F.....	Pittsford.....	80
Onida.....	Dodge, B. J.....	Verona.....	1
Otsego.....	Hillis, A. W.....	South Worcester.....	3
Schuyler.....	Jennings, John W.....	Watkins.....	1
Suffolk.....	Darnell, W. L. W.....	Eastport.....	1
	Wells, Horace J & Wini- fred M.....	Riverhead.....	4

WELSH

Otsego.....	Hillis, A. W.....	South Worcester.....	1
-------------	-------------------	----------------------	---

ASSES

Dutchess.....	Robinson, D. R.....	Fishkill Plains.....	1
Cattaraugus.....	Hoefer & Dorsey.....	Leon.....	1
Onondaga.....	Pendergast, S. C.....	Phoenix.....	1

CATTLE

[345]

CATTLE

NATIONAL ASSOCIATIONS

-Angus

American Aberdeen-Angus Breeders' Association
Chas. Gray, secretary, 817 Exchange St., Chicago, Ill.

Cheshire Breeders' Association

C. M. Winslow, secretary, Brandon, Vt.
Miss

Wisconsin Swiss Cattle Breeders' Association
Ira Inman, secretary, Beloit, Wis.

American Devon Cattle Club

L. P. Sisson, secretary-treasurer, Charlestown, Mass.
Incorporated

Michigan Belted Cattle Association of America
E. J. Kirby, secretary, Covert, Mich.

Canadian

American French-Canadian Cattle Breeders' Association
Willard Fralick, secretary, Marathon, Wis.

American Galloway Breeders' Association

R. W. Brown, secretary-treasurer, Canby, Minn.

American Guernsey Cattle Club

Wm. H. Caldwell, secretary-treasurer, New York, N. Y.

American Hereford Cattle Breeders' Association

R. J. Kinser, secretary, Kansas City, Mo.

Friesian

Holstein-Friesian Association of America
J. L. Houghton, secretary, Brattleboro, Vt.

American Jersey Cattle Club

J. M. Gow, secretary, 8 West 17 St., New York, N. Y.
Incorporated

Anglo-Durham Breeders' Association

H. Marts, secretary-treasurer, Greer, S. C.

Anglo-Cattle Club of America

A. Martin, secretary, Gotham, Wis.

American Short-Horn Breeders' Association

W. Harding, secretary, Chicago, Ill.

STATE AND COUNTY ASSOCIATIONS

Ayrshire**Pilot Ayrshire Club**

A. F. Spooner, secretary, Richville, N. Y.

Guernsey**New York State Guernsey Breeders' Association**

J. H. Seaman, secretary-treasurer, Glens Falls, N. Y.

Onondaga Guernsey Breeders' Club

W. R. Dunlop, secretary, Fayetteville, N. Y.

Otsego County Guernsey Cattle Club

M. G. Keenan, secretary, Oneonta, N. Y.

Holstein-Friesian**Holstein-Friesian Breeders' Club of New York**

Wing R. Smith, secretary, Syracuse, N. Y.

Allegany-Steuben Holstein-Friesian Breeders' Club

L. H. Burdick, secretary, Hornell, N. Y.

Chemung Valley Holstein Breeders' Association

W. R. Youmans, secretary, Horseheads, N. Y.

Cortland Holstein Club

Charles White, secretary, Cortland, N. Y.

Eastern New York Holstein Breeders' Club

Towner Kent, secretary, Patterson, N. Y.

Herkimer County Holstein-Friesian Breeders' Association

R. D. Tompkins, secretary, Dolgeville, N. Y.

Jefferson County Holstein-Friesian Breeders' Club

George Johnson, secretary, Chaumont, N. Y.

Lewis County Holstein-Friesian Breeders' Association

N. Wells Salmon, secretary, Glenfield, N. Y.

Madison-Chenango Counties Holstein-Friesian Breeders' Club

H. C. Wood, secretary, Morrisville, N. Y.

Otsego County Holstein Club

Earl L. Hall, secretary, Oneonta, N. Y.

St. Lawrence County Holstein-Friesian Breeders' Club

A. G. Doren, secretary, Ogdensburg, N. Y.

Southwestern New York Holstein-Friesian Breeders' Association

H. W. Walker, secretary, Randolph, N. Y.

Tioga County Holstein-Friesian Club

John G. Pembleton, secretary, Owego, N. Y.

Tri-County Holstein-Friesian Breeders' Association

E. E. Risley, secretary, Walton, N. Y.

Jersey**New York State Jersey Cattle Club**

C. O. Gould, secretary-treasurer, East Hampton, N. Y.

Delaware County Jersey Breeders' Improvement Association

Van E. Wilson, secretary, Delhi, N. Y.

Otsego County Jersey Cattle Club

Mrs. Lucinda Tuller, secretary, Mt. Vision, N. Y.

CATTLE

ABERDEEN-ANGUS

County in which stock is located	Owner	Address	Number of animals
Cayuga	Lake View Stock Farm	Union Springs	1
	Morse, James S.	Levanna	17
Erie	Kerr, T. J.	Collins	4
Jefferson	Cooley, B. L.	Rodman	5
	Orvis, Geo. E.	Black River	4
	Bonn, G. W.	Springwater	1
Livingston	Carver & Young	Churchville	3
Monroe	Velasco & Co.	New York City	18
New York	Smith, H. C.	Kent	12
Orleans	Hillis, W. L. & K. G.	South Worcester	3
Otsego	Leonard, Jesse H.	61 Maiden Lane, Albany	1
	(Farm at Maryland, N. Y.)		
Schoharie	Jackson, J. A.	Mineral Springs	10
Schuyler	Frost, Geo. A.	Montour Falls	14
	Hall Est., Miller	Alpine	2
	Eckardt, Clarence W.	Armonk	20
Wyoming	Pattridge, C. O., & Sons	Perry	1

AYRSHIRE

Albany	Cunningham, Norman R.	Greenville	7
	State Department of Agri- culture	Albany	4
Allegany	Alfred University	Alfred	3
	Allen, J. E.	Alfred	6
	Alvord, F. M.	Friendship	6
	Babbitt, M. P., & Son	Belmont	2
	Burdick, Geo. A.	Almond	*7
	Burdick, Geo. W.	Nile	43
	Canfield, J. J.	Friendship	*29
	Champlin, Reed	Alfred Station	1
	Cook, A. B.	Andover	2
	Cotton, Geo. I.	Friendship	27
	Emerson, A. B.	Whitney's Crossing	14
	Greene, Clark W.	Friendship, R. D. 1	13
	Hartman, C. E.	Cuba	3
	Hedden, Stanley	Cuba	5
	Hunt, Austin	Wellsville, R. D. 1	7
	Karr, S. S., & Son	Almond	80
	Keller, M. E.	Cuba	7
	Kenyon, L. H.	Friendship, R. D. 1	*26
	Leonard, L. W.	Wellsville	25
	Lewis, C. W., & Sons	Alfred Station	40

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Allegany.....	Lewis, Geo. M.....	Whitesville.....	*14
	Lewis, John M.....	Alfred Station.....	20
	Mead, F. G.....	Andover.....	29
	Mead, Ray E.....	Andover.....	*27
	Minton, Michael.....	Friendship.....	3
	Moses, E. A.....	Cuba.....	6
	Rigby, C. T.....	Spring Mills.....	8
	Sisson, Milton B.....	Almond.....	3
	Spencer, Roy J.....	Rushford.....	11
	Stowell, F. D.....	Black Creek.....	80
	Taylor, R. A.....	Rushford.....	7
	Thayer, C. J.....	Houghton.....	2
	Waldock, Z. J.....	Cuba.....	12
Broome.....	Bilby, Emerson.....	Deposit.....	2
	Kelsey, H.....	Oquaga Lake.....	38
Cattaraugus....	Abbey, Eugene.....	Randolph.....	*6
	Carnahan, M. W., & Sons..	Elko.....	1
	Clark, A. J.....	Cattaraugus.....	14
	Farwell, A. M., and Hall, Mrs. A. E.....	Franklinville.....	1
	Foster, G. H.....	South Dayton.....	10
	Greene, E. A.....	Ellicottville.....	1
	Hall, Mrs. A. E. (See Far- well, A. M.)		
	Kingsbury, W. G.....	Franklinville.....	25
	Mudgett, J. W.....	Ellicottville.....	38
	Pool, E. M.....	Otto.....	34
	Pritchard, E. C.....	Cattaraugus.....	3
	Pritchard, Wm. S.....	Cattaraugus.....	1
	Ross, E. P.....	Gowanda.....	22
	Rust & Olin.....	Ellicottville.....	5
	Schuppenhauer, Jos.....	Little Valley.....	20
	Scutt, A. W.....	Olean, R. D. 2.....	8
	Strong, O. J., & Son.....	Elton.....	*20
	Van Aernam, Henry, & Co.	Cattaraugus.....	*13
	Winship, Harry I.....	Salamanca, R. D. 1.....	1
Chautauqua.....	Barrett, Lee A.....	Mayville.....	1
	Cale, W. N., & Son.....	Ashville.....	3
	Carpenter, C. A.....	Ashville.....	16
	Christensen, Charles.....	Sinclairville.....	22
	Crandall, John M.....	Jamestown, R. D. 83.....	3
	Crouch, Thomas W.....	Jamestown.....	*5
	Davis, Fred.....	Dunkirk.....	3
	Day, A. E., & Son.....	Cherry Creek.....	4
	Eddy, D. F.....	Ashville.....	3
	Green Bros.....	Ashville.....	*14
	McCullough, Dell.....	Gerry.....	5

* Including pure-breds not registered.

FIG. 15.—AYRSHIRES SHOWN AT NEW YORK STATE FAIR.

FIG. 16.—ABERDEEN ANGUS SHOWN AT NEW YORK STATE FAIR.

FIG. 17.—BROWN SWISS COW, CONSTANCE 3689.

Production, 15,000 lbs. milk and 600 lbs. fat. Owned by Walhalla Farms, Middleburgh, N. Y.

County in which stock is located	Owner	Address	Number of animals
Chautauqua	Near Bros.	Jamestown	1
	Peterson, C. E.	Jamestown	10
	Scofield, Geo. A.	Cherry Creek	4
	Shelters, Grant	Kennedy	7
	Todd, H. F.	Lilly Dale	2
	Wade, Bert D.	Conewango Valley	1
	Wollaston, J. M.	Cherry Creek	3
Chenango	Skinner, S. V.	Oxford	17
Clinton	Brown, John L.	Chazy	11
	Cross, John H.	West Chazy	1
	Kellogg, Henry T.	Valcour	11
	Letson, J. J., & Son	Mooers	3
	Palmer, Lynde	Chazy	2
Cortland	Burrows, E. L.	Cortland	*9
	Johnson, A. L.	Marathon	*13
	Stanley, Clark S.	Marathon	10
	Wight, E. D.	East Freetown	1
Delaware	Brown, A. L.	Fish's Eddy	*3
	Rifenbark, L. E.	East Masonville	*15
	Swart, H. D.	Margaretville	2
	Ward, C. G.	Delhi	12
Dutchess	Briarcliff Farms, Inc.	Pine Plains	8
	Brusie, O. W.	Millerton	26
	Sague, James E.	Poughkeepsie	*75
Erie	Baker, John H.	486 Ellicott Sq., Buffalo	53
	Plumb, Ralph	Buffalo	2
	Rumsey, Charles Cary	East Concord	21
	Swift, Parton	886 Ellicott Sq., Buffalo	16
Essex	Eggleston, R. W.	Wadhams	1
	Lake Placid Co.	Lake Placid Club	1
	McBean, Mrs. C. M.	Saranac Lake	2
	Moses, Frank M.	Ticonderoga	5
	Porter, Fred L.	Crown Point	14
Franklin	Shattuck, Sheldon M.	Ticonderoga	4
	Badore, Nelson	Malone	1
	Dewey, Thomas M.	Malone	13
	Douglas, N. A.	Chateaugay	*37
	Hoyt, Henry E.	Constable	4
	Kimball, S. W.	Brushton	11
	O'Brien, Thomas E.	Fort Covington	*7
	Rood, M. M.	West Bangor	2
	Southworth, John T.	North Bangor	4
	Welch, M. G., & Son	Burke	25
	Whipple, L. W., & Son	Malone	30
Fulton	Parsons, T. L.	Gloversville	7
Greene	Healey, J. F. (Sunside Farm)	Sunside	*24
	Stanton, Frank	Greenville	19

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Greene.....	Story, L. M..... Sunside Farm. (See Healey, J. F.)	Freehold.....	22
Herkimer.....	Caulkins, Frank E..... Deck, O. H., M. D..... Harris, John G..... Locust Grove Farm. (See Morts, H. M.)	Mohawk..... Herkimer..... Middleville.....	3 *10 1
	Morts, H. M..... (Locust Grove Farm)	Mohawk.....	12
	Smith, Levi, & Son.....	Herkimer.....	28
Jefferson.....	Breen, Isaac R..... Collins, Ross..... Converse, G. H..... Flint, W. A..... Merrill, S. W. & E.....	Watertown..... Adams..... Woodville..... Adams Center..... Carthage.....	*10 2 80 2 8
Jefferson.....	Pool, L. H..... Price, Arthur..... Smith, Jay W.....	Theresa..... Theresa..... Pierrepoint Manor.....	12 10 *9
Lewis.....	Goutremont, William S.... Williams, J. L.....	Castorland..... Barnes Corners.....	8 1
Livingston.....	Markham & Puffer..... Whitmore, H. E.....	Avon..... Avon.....	5 3
Madison.....	State School of Agriculture..	Morrisville.....	2
Montgomery	Gros, Charles L..... Homkey, Henry.....	Fonda, R. D. 2..... Fort Plain.....	2 *8
Oneida.....	Chamberlin, B. L..... Craig, A. H..... Garlick, H. M..... Miller, Walter G..... Benton & Mix..... Morse, Ray S..... Orendorff, W. H..... Tripp, J. D.....	Verona Station..... Rome, R. D. 1..... Alder Creek..... Ava..... Clinton..... Oriskany..... Rome, R. D. 2..... West Branch.....	5 1 *40 4 7 2 1 1
Onondaga.....	Brown, Chas. H..... Ferguson, Geo. S.....	Jordan..... North Syracuse.....	5 35
Orange.....	Crawford, Wm..... Fitzgerald, Thomas..... Harris, William H..... (Moodua Farm) Horton, H. A..... Monell, Ambrose..... Moodua Farm (See Harris, Wm. H.) Sears & Howell..... Whitman, James S.....	Monroe..... Middletown..... Newburgh, R. D. 3..... Johnson..... Washingtonville..... Blooming Grove..... Central Valley.....	7 5 17 7 157 8 13
Orleans.....	Beebe, E. P., & Son..... Brown, H. L.....	Holley..... Waterport.....	5 1

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Oswego.....	Bonner, Claud.....	Richland.....	9
	Burr, Mary C.....	West Monroe.....	14
	Coon, W. H.....	Lacona.....	8
	Guile, Chas. R.....	Fulton.....	*9
	Huffstater, L.....	Sandy Creek.....	22
	Miller, H. L.....	Parish.....	15
	Yule, Ray.....	Oswego.....	1
Otsego.....	Barney, Kent.....	Milford.....	20
	Carleton, E. A.....	Mount Vision.....	1
	Glimmerglen Farms (See Hyde, W. T.)		
	Hillis, A. W.....	South Worcester.....	8
	Hyde, W. T..... (Glimmerglen Farms)	Cooperstown.....	78
	Moore, Miss, Calfern B.....	Worcester, R. D. 2.....	14
	Wright, F. S.....	Worcester.....	*2
Putnam.....	Ryan, Patrick (See Ryanogue Farm)		
	Ryanogue Farm.....	Brewster.....	80
	State Department of Agri- culture.....	Albany.....	4
Rensselaer.....	Bennett, Clarence.....	Valley Falls.....	7
	Bennett, Elvia.....	Valley Falls.....	2
	Bennett, Frances.....	Valley Falls.....	2
	Button, E. L.....	Melrose.....	31
Rockland.....	Cutler, Otis H.....	Suffern.....	14
St. Lawrence.....	Abbott, J. Henry.....	Gouverneur.....	5
	Allison's Island Farm and Allison, J. W.....	Waddington.....	*45
	Bancroft, Earl.....	Edwards.....	*1
	Barnes, Vernon A.....	Norwood.....	21
	Chandler, E. S.....	Richville.....	*33
	Clark, Nathan E.....	Potsdam.....	25
	Forrester, A. W.....	Chippewa Bay.....	2
	Grow, Lawrence L.....	Fort Jackson.....	7
	Griffith, W. E.....	Madrid.....	5
	Harrington Brothers.....	Canton.....	15
	Hatch, L. B.....	Hermon.....	10
	Hill, J. Edwin.....	Gouverneur.....	26
	Kerr, A. E.....	Edwards.....	*4
	McCarty, J. D.....	Richville.....	8
	Maine, Hubert C.....	Hermon.....	6
	Marshall, Charles M.....	Gouverneur.....	30
	Marshall, J. A.....	Gouverneur.....	58
	Maybee, George N.....	Oswegatchie.....	4
	Noble, Cleland.....	Edwards.....	16
	Philpot, J. G.....	Canton, R. D. 3.....	8

* Including p re-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
St. Lawrence.....	Pike, Geo. E.....	Gouverneur.....	80
	Rasey, G. B.....	De Kalb Junction.....	7
	Rich, F. A.....	Richville.....	5
	Robinson, Wright J.....	Edwards.....	2
	Rodger, G. L.....	Gouverneur.....	40
	Rowley, A. M. & W. H....	Gouverneur.....	13
	Scott, B. T.....	Potsdam.....	5
	Small, C. E.....	Gouverneur.....	8
	Smith, Dan H.....	Brasher Falls.....	2
	Spooner, A. F.....	Richville.....	190
	Squires, Robert F.....	Massena.....	6
	State School of Agriculture..	Canton.....	28
	Streeter, M. H., & Son.....	Gouverneur.....	45
	Stuart, John B.....	Canton.....	16
	Taylor, J. A.....	Hammond.....	2
	Willis, Mrs. Alice L.....	Potsdam.....	4
	Wilson, R. R.....	Hammond.....	3
Schenectady.....	Jeffers, William W.....	Pattersonville.....	7
Schoharie.....	Myers, Morgan S.....	Barnerville.....	13
	Thompson, S.....	Cobleskill.....	11
Steuben.....	Baker, J. O., Bros.....	Andover.....	10
	Blake, Fred.....	Kanona.....	5
	Davison, Milton W.....	Canisteo.....	35
	Dempsey, T. M.....	Rexville.....	6
	DeMun, R. O.....	Cameron Mills.....	4
	Grenolds, Levi S.....	Rexville, R. D. 1.....	1
	Guile, W. R.....	Wayland.....	2
	Gurnsey, James H., & Co..	Woodhull.....	*37
	Gurnsey, L. C.....	Woodhull.....	33
	Jimerson, Bert.....	Corning, R. D. 4.....	*7
	Oliver, Albert C.....	Cochocton.....	*4
	Speer, Harry L.....	Corning, R. D. 2.....	*1
	Stewart, J. Henry.....	Kanona.....	40
	Swan, T. O. & A. B.....	Jasper.....	51
	Toby, Harrison B.....	Lindley.....	9
	Tuttle, M. A.....	Hornell.....	50
	Tyler, M. N.....	Greenwood.....	2
	Woodward, Frank L.....	Jasper.....	*6
	Woodward, G. R.....	Woodhull.....	25
Suffolk.....	Young, Chauncey H.....	Riverhead.....	6
Sullivan.....	Brooks, Frank.....	Grahamsville.....	9
	Brooks, Jesse.....	Grahamsville.....	6
	Burr, H. S.....	Bethel.....	4
	Hermann, Charles.....	Callicoon.....	10
	Kastner, Alfred.....	Callicoon Center.....	1
Tioga.....	Pheylen, Paul J.....	Richford.....	6
Tompkins.....	Cornell University.....	Ithaca.....	16

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Ulster.....	Allen, Loring T.....	Brodhead.....	2
	DeWitt, Matthew Ten Eyck	Hurley.....	1
	Dubois, Fred.....	New Paltz, R. D. 1.....	17
Warren.....	Hudnut, Richard A.....	North Creek.....	1
Washington.....	Bartholmew, H. A.....	Whitehall.....	10
	Courtney, R. W.....	Putnam Station.....	3
	Ellithorpe, Earnest.....	Hudson Falls.....	1
	Larmon, F. B.....	Greenwich.....	13
	Mosher, Fred E.....	Greenwich.....	6
	Thompson, C. R.....	Salem.....	13
	Thomson, H. L.....	Granville.....	3
	Yarter, C. M.....	Hudson Falls.....	22
Westchester.....	Chisholm, Hugh J.....	Port Chester.....	140
	(Strathglass Farm)		
	Lincoln Agricultural School.	Lincolndale.....	20
	Strathglass Farm. (See Chisholm, Hugh J.)		
Wyoming.....	Goodell, E. G.....	Gainesville.....	2
	Hyman, Joseph.....	Strykersville.....	*6
	Olin Brothers.....	Perry.....	16
	Petrie, H. J.....	Attica.....	3
	Tuttle, W. H.....	Perry.....	18

BROWN SWISS

Allegany.....	Mapes, B. C.....	Wellsville.....	9
Chenango.....	Calvert, E. M.....	Georgetown.....	1
Dutchess.....	Crosby, Maunsell S.....	Rhinebeck.....	11
Essex.....	Powell, Stephen A.....	Essex.....	6
Jefferson.....	Trowbridge, Wm. R.....	Adams Center.....	15
Lewis.....	Virkler, C. F.....	Lowville.....	1
	Virkler, Wm. F.....	Carthage.....	1
Monroe.....	Forest Farms. (See Hale, Wm. B.)		
	Hale, Wm. B.....	Aqueduct Bldg., Rochester..	36
	(Forest Farms)		
	Janes, W. E.....	Charlotte.....	26
	Peart, F. R.....	West Webster.....	2
Onondaga.....	Hoyt, Chas. R.....	Skaneateles.....	1
Otsego.....	Hillis, A. W.....	South Worcester.....	8
Rensselaer.....	Herrington, C. M.....	Johnsonville.....	6
	Marshall, James S.....	Johnsonville.....	20
Schuyler.....	Hathaway, B. L.....	Alpine.....	15
Tioga.....	Leonard, L. H.....	Owego.....	33
	Nixon, Louis K.....	Berkshire.....	*12
Washington.....	Maxwell, Henry C. G.....	Coila.....	3
	Mil'er, Raymond G.....	Greenwich.....	16
	Roberson, Albert H.....	Shushan.....	1
	Robertson, W. D.....	Coila.....	11

* Including pure-breds not registered.

CANADIAN

County in which stock is located	Owner	Address	Number of animals
Jefferson.....	Orvis, Geo. E.....	Black River.....	6
Otsego.....	Brimmer, A. G.....	Mt. Vision.....	9
	Hillis, A. W.....	South Worcester.....	10

COLUMBIAN

Otsego.....	Brimmer, A. G.....	Mt. Vision.....	1
	Hillis, A. W.....	South Worcester.....	7
	Gregory, F. L.....	Mt. Vision.....	35

DEVON

Chautauqua.....	Lewis, F. S.....	Ashville.....	11
Delaware.....	Dicks, Nicholas.....	Walton, R. D. 7.....	7
Greene.....	Strong, Lyman H.....	Cornwallville.....	1
Otsego.....	Chamberlin, F., & Son.....	Maryland.....	8
	Hillis, W. L., & K. G.....	South Worcester.....	2
St. Lawrence.....	Hamilton, E. C.....	Gouverneur.....	8
Schoharie.....	Barton, Wm. H.....	Central Bridge, R. D.....	12
Steuben.....	Jones, M. S.....	Danville, Ill.	
	(See Wheeler Homestead, Kanona)		
	Wheeler Homestead.....	Kanona.....	16

DEXTER

Nassau.....	Gould, Howard.....	Port Washington.....	35
-------------	--------------------	----------------------	----

DUTCH BELTED

Chautauqua.....	Meade, W. P., & Son.....	Jamestown, R. D. 77.....	9
Cortland.....	Smith, Erskine S.....	Marathon.....	19
Delaware.....	Dicks, Nicholas.....	Walton.....	1
Dutchess.....	Abel, Claude.....	Verbank.....	12
	Fowler, Northrup.....	Amenia.....	38
Onondaga.....	Dunham, Mrs. Norvilla.....	Plainville.....	15
Orange.....	Heaton, Stephen B.....	Monroe.....	16
Otsego.....	Hillis, W. L. & K. G.....	South Worcester.....	6
St. Lawrence.....	Todd, S. G.....	Rensselaer Falls.....	1
Sullivan.....	Pelton, Floyd I.....	Monticello.....	7
Tioga.....	Williams, Edson.....	Newark Valley.....	17
Ulster.....	Woolsey, John P.....	Hurley.....	2

GALLOWAY

Otsego.....	Hillis, A. W.....	South Worcester.....	10
Schuyler.....	Frost, Geo. A.....	Montour Falls.....	6
	Hall, Miller, Estate.....	Alpine.....	4

FIG. 18.—CANADIAN BULL EXHIBITED AT NEW YORK STATE FAIR.

FIG. 19.—DEVON COW.
(Owned by Wheeler Homestead, Kanona, N. Y.)

FIG. 20.—DUTCH BELTED CATTLE SHOWN AT NEW YORK STATE FAIR.

County in which stock is located	Owner	Address	Number of animals
GUERNSEY			
Albany.....	Applebee, Albert.....	Dormansville.....	1
	Bradt, Frederick.....	Selkirk.....	4
	DeWitt, J. M.....	Potter Hollow.....	3
	Hagaman, Emma A.....	883 Madison Ave., Albany..	6
	Palmer, Sheridan B.....	Greenville.....	4
	Slingerland, Amasa.....	Delmar.....	16
	Ten Eyck, Peter G.....	Altamont, R. D. 3.....	11
	Van Atten, Jacob A.....	Feura Bush.....	18
	Whitney, C. L. A.....	Albany.....	20
Allegany.....	Alfred University.....	Alfred.....	3
	Barrett, Geo. W.....	Andover.....	35
	Chamberlain, Dr. J. H.....	Belfast.....	1
	Gibson, James D.....	Whitney Crossing.....	10
	Mills, C. V.....	Fillmore.....	10
	Sisson, Milton B.....	Almond.....	4
	Waldock, Z. J.....	Cuba.....	1
	Willeys, Isaac, Estate.....	Belmont.....	18
	Wright, E. E.....	Scio.....	20
Broome.....	Bell, John.....	Tunnel.....	1
	Harts, Ed.....	East Windsor.....	1
	Howe, H. G.....	Sanford.....	1
	Oathout, W. J.....	Port Dickinson.....	9
	Walker, Joe.....	Nineveh.....	7
	Woodruff, F. E.....	Binghamton.....	1
Cattaraugus.....	Eddy, Robert D.....	Cattaraugus.....	8
	Godfrey, F. N.....	Olean.....	1
	O'Brien, Jas. P.....	Ellicottville.....	1
	Owens, C. R.....	Freedom.....	3
	Ryther, E. N.....	Franklinville.....	1
	Torge & Swartz.....	Salamanca.....	21
	Wilcox, B. L.....	Little Valley.....	3
Cayuga.....	Alexander, Ray H.....	Union Springs.....	7
	Alexander, W. A.....	Union Springs.....	26
	Avery, W. B., jr.....	Aurora.....	1
	Bishop, Mrs. Francis E.....	Auburn.....	1
	Bower, John I., & Son.....	King Ferry.....	6
	Cady, Fred, & Son.....	Sennett.....	22
	Coggshall, L. L.....	Locke.....	40
	Crocker, H. C., & Son.....	Sennett.....	65
	Farnam, Merritt R.....	Ira.....	9
	Gildersleeve, Frank P.....	Union Springs.....	13
	Hoag, Jas. T.....	Ira.....	4
	Hopkins, W. W.....	Moravia.....	1
	Hornburg, Chas.....	Ira.....	55
	Judson, William.....	Cato, R. D. 46.....	8
	Marshall, Wm.....	Aurora.....	2
	Minard, W. W., & Son.....	King Ferry.....	5

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Cayuga.....	Morgan, S. W.....	Poplar Ridge.....	1
	Mosher, Gail W.....	Union Springs.....	1
	Parker, W. P.....	Moravia.....	31
	Post, Otto W.....	Ensenore.....	80
	Roe, H. M., & Son.....	Locke.....	6
	Southard, Floyd.....	Ira.....	30
	Strohmenger, T. E.....	Port Byron.....	1
	Torsleff, L. F.....	Union Springs.....	3
	Webster, Henry U.....	Auburn, R. D. 4.....	2
	Wells, Samuel.....	Ira.....	12
	Whitman, Fred E.....	Moravia.....	1
	Wilson, William.....	Auburn, R. D. 9.....	7
	Wyant, Joseph.....	Ensenore.....	7
Chautauqua.....	Allnatt, S. C.....	Cherry Creek.....	1
	Barlow, Richmond O.....	Fredonia.....	2
	Gifford, M. E.....	Sherman.....	15
	Hewes, E. B.....	Mayville.....	30
	Pickup, John S.....	Cherry Creek.....	18
	Richmond, Nelson G.....	Fredonia.....	20
	Taylor, Clarence N.....	Kennedy.....	3
Chemung.....	Edsall, J. B.....	Pine City.....	20
	Philo, Ruth Mildred.....	Elmira.....	50
Chenango.....	Babock, H. E.....	Oxford, R. D.....	17
	Barr, Geo. L.....	Afton.....	3
	Chamberlain, Fred G.....	Afton.....	5
	Collyer, S. H.....	Smithville Flats.....	1
	Dutton, Clayton.....	South Otselic.....	18
	Gregory, V. E.....	Afton.....	9
	Jones, J. E.....	Oxford.....	6
	Kibbe, William H.....	North Pitcher.....	3
	Lidell, J. D.....	McDonough.....	11
	Salisbury, E. V.....	Oxford.....	13
	Stillson, Geo. A.....	Afton.....	8
	Tarbell Farms. (See Tarbell, Gage E.)		
	Tarbell, Gage E.....	Smithville Flats.....	81
	(Tarbell Farms)		
Clinton.....	Arthur, Chas. H.....	Peru.....	17
	Heart's Delight Farm.....	Chazy.....	8
	Lapham, E. N.....	Peru.....	1
	Miner, W. H. (See Heart's Delight Farm)		
	Smith, Helen I.....	Plattsburgh.....	7
	Turner, Chauncey M.....	Schuyler Falls.....	17
	Weaver, V. W.....	Morrisonville.....	1
Columbia.....	Dinehart, Delbert.....	Copake.....	1
	(Empire Farm)		
	Empire Farm. (See Dinehart, Delbert.)		

County in which stock is located	Owner	Address	Number of animals
Columbia.....	Kinney, Oscar F.....	North Chatham.....	27
	Ogden, Alfred T.....	Kinderhook.....	14
	Palmer, M.....	Valatie.....	4
	State Department of Agri- culture.....	Albany.....	7
	Sunnyside Farm. (See Van Alstyne, Edward, & Son.)		
	Van Alstyne, Edward, & Son (Sunnyside Farm.)	Kinderhook.....	32
	Wagant, R. M., Co.....	Mt. Lebanon.....	*1
Cortland.....	Conrad, Lester.....	Marathon.....	3
	Tarbell, C. W.....	East Freetown.....	1
Delaware.....	Amos, A. G.....	Delhi.....	8
	Bingin, John H.....	Fraser.....	9
	Danks, H. Russell.....	De Lancey.....	25
	Dann, Frank W.....	Walton.....	20
	Dann, Matthew, & Son....	Downsville.....	3
	Goodrich, Joseph.....	Beerston.....	3
	Haynes, John E.....	Margaretville.....	1
	Johnson, Ambrose.....	Walton.....	1
	Johnson, L. A.....	Walton.....	7
	Macfarlane, R. B.....	Delhi.....	7
	Mead, Demas.....	Margaretville.....	5
	Neish Bros.....	De Lancey.....	7
	Northrup, D. P.....	De Lancey.....	22
	Purchell, George C.....	Roxbury.....	7
	Sutherland, W. A.....	De Lancey.....	*13
	Trask, Austin O.....	Readburn.....	3
	Turner, Geo. R.....	Deposit.....	8
	Turner, Roscoe C.....	Deposit.....	2
Dutchess.....	Hotchkiss, Frank A.....	Millerton.....	50
	Knapp, Clarence A.....	Stanfordville.....	17
	Moore, Claude.....	Tivoli.....	6
	Rymph, J. B.....	Salt Point.....	1
	Traver, Chas. R.....	Rhinebeck.....	1
	Webb, J. G.....	Clinton Corners.....	45
Erie.....	Barr, William H.....	Derby.....	12
	Cheney, Nelson W.....	Eden.....	2
	Kellogg, Spencer.....	Derby.....	20
	Lawton, Edwin G.....	Lawtons.....	7
	Morton, W. J.....	Springville.....	25
	Stowell, Clinton S.....	Alden.....	4
Essex.....	Benedict, W. W.....	Keeseville.....	1
	Harlan, James S.....	Essex.....	12
Franklin.....	Averill, H. G.....	Malone.....	*6
	Eddy, E. A.....	Malone, R. D. 2.....	15
	Eddy, Geo.....	Malone.....	13

*Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Fulton	Enos, E. F.	Gloversville	3
	Wilbur, G. H.	Osborn Bridge	*5
Genesee	Willman, M. I.	Pavilion, R. D.	2
	Bell, Howard & Percis	Stafford	6
	Bridge, George A.	Batavia	36
	Parnell, Chester A.	Pavilion	4
	Rumsey, M. C.	Batavia	1
	Burgess, C. D.	Grapeville	3
Greene	Chamberlin, Edw. A.	Westkill	1
	Conine, S., & Son	Windham	3
	Johnson, M. E.	Jewett	5
	Meddaugh, Raymond	Acra	4
	Morse, A. D.	Jewett	6
	Peck, Charles A.	Hensonville	7
	Story, John W.	Freehold	1
	Weeks, Mrs. Bertha M.	Surprise	8
	Whitcomb, E. Burdette	Round Top	5
	White, Geo. M.	Freehold	39
	Beardslee, G. R.	East Creek	5
	Johnson, S. P., & Son	Frankfort	7
Herkimer	Rankin, W. W.	Little Falls	8
	Zoller, T. J.	Little Falls	7
	Graves, B. W.	Watertown, R. D. 5	1
	Kiechle, M. B.	Philadelphia	17
Jefferson	Nutting, Pitt F.	Woodville	2
	Herring, J. M., & Son	Leicester	5
	Markham & Puffer	Avon	10
Livingston	Pemberton, V. N.	Livonia	1
	Swarts, Scott W.	Springwater	27
	Vary, Mary Payne	Lima	5
	Watkins, E. D.	Lima	7
	Whiting, C. L.	Avon	35
	Whitmore, H. E.	Avon	5
	Dwight, P. L.	De Ruyter	12
	Howard, Emery S.	Bouckville	3
Madison	State School of Agriculture	Morrisville	2
	Wilcox, Flora	Eaton	6
	Austin, G. Irving	Morton	5
	Bown, Bruner G.	Fairport	1
Monroe	Chapman, Charles	Spencerport	7
	Clark, Charles J.	Spencerport	1
	Eastman, George	Rochester	2
	Barlow, Ralph & Floyd	Amsterdam, R. D. 1	5
	DeForest, Richard D.	Amsterdam	11
Montgomery	Elwood, John S.	Fort Plain, R. D. 3	7
	Moody, F. D.	Canajoharie	6
	Runkle, Roy P.	Johnstown	5

* Including pure-breds not registered.

FIG. 21.—GUERNSEY COW, LINDEN GIRL 42762.
(Courtesy of the American Guernsey Cattle Club)

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Montgomery.....	Vander Veer, G. H.....	Amsterdam, R. D. 2.....	4
	Van Horne, C. S.....	Amsterdam, R. D.....	2
Nassau.....	Bergquist, J. G.....	Glen Head.....	8
	Craft, Harvey C.....	Glen Cove.....	9
	Groton Farms (See Winthrop, Beekman).		
	Nichols, John W. T.....	Cold Spring Harbor.....	4
	Pulitzer, Ralph.....	Manhasset.....	13
	Schiff, Mortimer L.....	Oyster Bay.....	14
	Stern, Benjamin.....	Roslyn, L. I.....	9
Nassau.....	Webb, J. Watson.....	Syosset.....	6
	Winthrop, Beekman..... (Groton Farms)	Westbury.....	20
New York.....	Borden's Condensed Milk Co.....		
		108 Hudson St., New York..	31
Niagara.....	Gow, J. Reid.....	Appleton.....	1
	Miller, Chas. J.....	Newfane.....	13
	Perry, S. A.....	Lockport.....	13
	Schaffer, F. W., & W. D...	Newfane.....	1
Oneida.....	Abbuhl Bros.....	Rome, R. D. 4.....	4
	Benton & Mix.....	Clinton.....	4
	Bullock, W. A.....	Barneveld.....	18
	Clark, Eugene H.....	Westmoreland.....	15
	Dodge, B. J.....	Verona.....	4
	Garsden, Ralph R.....	Westmoreland.....	*1
	Griffiths, E. O., & Son.....	Rome, R. D. 4.....	1
	Jordan, Thomas R.....	Sauquoit.....	5
	Law, Oscar F.....	Verona.....	4
	Walsworth, A. E.....	Rome, R. D. 6.....	6
Onondaga.....	Adsit, J. Leonard.....	Baldwinsville.....	9
	Barrus, R. D.....	Liverpool.....	1
	Bowen, Ralph A.....	Syracuse, R. D. 5.....	1
	Clift, Jesse F.....	Syracuse, R. D. 3.....	4
	Dixon, David M., & Sons..	Memphis.....	17
	Dunlop, W. R.....	Fayetteville.....	33
	Estabrook, William S.....	Fayetteville.....	12
	Haith, H. J.....	Marlius.....	2
	Hayden, Wallace.....	Lysander.....	1
	Huntington, H. L.....	Baldwinsville.....	1
	Ioset, J. A.....	Baldwinsville.....	6
	Mills, W. E.....	Rose Hill.....	8
	Munro, Thos. N.....	Camillus.....	15
	Richard, H. J.....	Jordan, R. D. 1.....	7
	Sands, Guy W.....	Camillus.....	3
	Stebbens, W. B.....	Lamson.....	6
	Strickland, Clair.....	Camillus.....	9
	Taber, C. H.....	Manlius.....	6
	Thorne, Wm. T.....	Skaneateles.....	1

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Onondaga.....	Tully Farms.....	Tully.....	5
	Van Doren Bros.....	Lysander.....	14
	Voorhees, D. E.....	Plainville.....	12
	Wagner, R. A., & Son.....	Baldwinsville.....	5
	Wallis, E. G., & Son.....	Apulia.....	1
Ontario.....	Benham, F. G.....	Canandaigua.....	125
	Burnette, Frank H.....	Phelps.....	2
	Van Gelder, G. B.....	Canandaigua.....	11
Orange.....	De Vine, Dr. J. F.....	Goshen.....	4
	Miller, J. G.....	Bullville.....	3
	Ramsdell, J. A. P.....	Newburgh.....	1
Orleans.....	Ostrander, R. C.....	Knowlesville.....	6
Oswego.....	Karpinski, Henry J.....	Oswego.....	10
	Kathergay Farms (See Whitaker, N. L.)		
	Loveland, John H.....	South Granby.....	2
	Mosher, R. C.....	Parish.....	1
	Norton, I. H.....	Sandy Creek.....	2
	Pontiac Farms. (See Travis, A. Lincoln.)		
	Travis, A. Lincoln.....	Oswego.....	1
	(Pontiac Farms)		
	Weatherup, T.....	Mallory.....	6
	Whitaker, N. L.....	Fulton.....	18
	(Kathergay Farms)		
Otsego.....	Bennett, M. J.....	Richfield Springs.....	10
	Brown, Irving A.....	Pleasant Brook.....	7
	Buckley, Henry H.....	Oneonta, R. D. 2.....	6
	Bundy, M. C. & Root, H. B.....	Cooperstown.....	6
	Caney, Geo. D.....	Richfield Springs.....	1
	Chamberlin, F., & Son.....	Maryland.....	2
	Flint, A. H.....	Worcester.....	7
	Hansen, George.....	South Valley.....	*8
	Harris, Mrs. Frederick.....	Gilbertsville.....	1
	Horen, E. C.....	Richfield Springs.....	4
	Keenan, M. G.....	Oneonta.....	24
	Kidder, George T.....	Laurens.....	1
	McFee, Frank.....	Oneonta.....	20
	Mathewson, Cassius.....	Hartwick, R. D. 1.....	*8
	Mayne, G. O.....	Hartwick.....	4
	Mills, Frank L.....	Garrattsville.....	11
	More, Geo. M.....	Cooperstown.....	1
	Myers, Geo. B.....	Garrattsville.....	5
	Naylor, Chas.....	W. Laurens.....	1
	Naylor, H. W.....	Mt. Vision.....	7
	Orr, D. S., & Son.....	Oneonta.....	1

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Otsego.....	Packer, A. E.....	Portlandville.....	5
	Palmer, Floyd B.....	Richfield.....	1
	Root, H. B. (See Bundy, M. C.)		
	Smith, Frank M.....	Springfield Center.....	42
	Tyler, Jesse E.....	Worcester, R. D. 1.....	2
	Wilbur, Isaac.....	Wells Bridge.....	1
	Williams, Fred S.....	Laurens.....	1
Rensselaer.....	Borden, F. W., & Son.....	Schaghticoke.....	9
	Breese, Chas. A.....	Hoosick Falls.....	8
	Hoffman, Martin.....	Valley Falls.....	4
	Hunter, J. H.....	Valley Falls.....	30
	Ives, Paul D.....	Valley Falls, R. D. 1.....	11
	Morrissey, Thos. A.....	Walloomasac.....	3
	Wood, Mrs. Walter A.....	Hoosick Falls.....	1
Rockland.....	Martens, P.....	Pearl River.....	2
St. Lawrence.....	Dewey, L. L.....	Lawrenceville.....	6
	Hamilton, E. C.....	Gouverneur.....	5
	Marshall, Clark H.....	Gouverneur.....	3
	Marshall, J. T.....	Lisbon.....	3
	Patten Bros.....	Lawrenceville.....	1
Saratoga.....	Armer, W. L.....	Ballston Spa.....	2
	Birch, R. K.....	Elnora.....	*6
	Cary, A. Heywood.....	Gansevoort.....	10
	Charlton Industrial Farm School.....	Ballston Lake.....	19
	Inglehart, F. M.....	Ballston Spa.....	6
	Gick, Frank.....	Saratoga Springs.....	17
	Holbrook, Frank M.....	Ballston Lake.....	1
	Hopkins, George G., jr.....	Ballston Lake.....	7
	Kimball, Isaac.....	Ballston Spa.....	2
	Middlebrook, Truman.....	Greenfield Center.....	8
	Palmer, Ervin.....	Gansevoort.....	1
	Parent, J. I.....	Ballston Spa.....	8
	Sherman, Frank J.....	Ballston Spa.....	6
	Smith, Frank L.....	Ballston Spa.....	20
	Thomas, Melvin.....	Schuylerville, R. D. 1.....	1
	Van Dewerker, George.....	Schuylerville, R. D.....	5
Schenectady.....	Retersdorf, John.....	Scotia, R. D. 2.....	1
Schoharie.....	Lawyer, Sosthenes.....	Cobleskill.....	1
	Roe, C. F.....	Cobleskill.....	7
	Young, George.....	Central Bridge.....	2
Schuyler.....	Halpin, Edward.....	Odessa.....	2
	Jennings, John W.....	Watkins, R. D. 1.....	1
	Rhodes, E. F.....	Moreland Station.....	1
	Waugh, Joseph.....	Watkins.....	10

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Steuben	Bowlby, Helene B.	Bath	1
	Carpenter, Willard	Woodhull	19
	Gelder, Jay	Bath	2
	Marsh, Frank & Son	Jasper	3
	Miller, Niles K.	Woodhull	12
	Owens, J. W.	Rathbone	2
	Parker, J. D.	Campbell	1
	Perry, H. W.	Cameron Mills	4
	Tuttle, M. A.	Hornell	30
	Wilson, A. P.	Cameron Mills	4
Suffolk	Corum, Frank J.	Riverhead	10
	Smith, Fleet K.	East Northport	9
Sullivan	Craig, B. P., R. M., & K. M. (Thornliebank Farms)	Glen Spey	16
	Smith, Samuel	Claryville	1
	Thornliebank Farms (See Craig, B.P., R.M. & K.M.)		
Tioga	Lange, P. P.	Spencer	1
	Mapledale Farm (See Roper, Fred H.)		
	Millard, N. G.	Newark Valley	20
	Roper, Fred H. (Mapledale Farm)	Owego	20
	Taylor, W. M.	Nichols	9
Tompkins	Allen, F. R.	Ithaca	30
	Bacon, Glenn L.	Groton	8
	Banks, S. E.	Ithaca	15
	Blatchley, V. B.	Ithaca	5
	Carman, C. Owen	Trumansburg	2
	Champlin, Earle	Groton	16
	Coggshall, W. L.	Groton	5
	Cornell University	Ithaca	16
	Edsall, Chas.	Freeville	1
	Hungerford, Nye	Ithaca	5
	Hungerford, Roy E.	Ithaca	3
	Moore, V. A.	Ithaca	10
	Royce, Chas. H.	Ithaca	7
	Tailby, G. W., jr.	Ithaca, R. D. 2	6
	Tarbell, Edward D.	McLean	1
	VanKirk, E. S.	Newfield	11
	Weed, D. M.	West Danby	2
Ulster	Payne, Col. O. H.	West Park	3
	Winston, J. O.	Saugerties	30
Warren	Loomis, J. R., jr.	Glens Falls	25
	Wakely, H. T.	Bolton Landing	1
Washington	Bartholmew, H. A.	Whitehall	15
	Blandy, I. C.	Greenwich	63
	Borden Est., R. A.	Schaghticoke	20

County in which stock is located	Owner	Address	Number of animals
Washington.....	Cleveland, Albert B.....	Salem.....	2
	Douglass, B. T.....	Whitehall.....	1
	Ellithorpe, Earnest.....	Hudson Falls.....	1
	Elmpines Farm (See Sherman, J. G.)		
	Hand, Allen F.....	Greenwich.....	4
	Petteys, John S.....	Greenwich.....	20
	Prouty, D. E., jr.....	Raceville.....	4
	Shaler, Andrew.....	Cambridge.....	7
	Shaw, R. E.....	Greenwich.....	4
	Sherman, J. G..... (Elmpines Farm)	Greenwich.....	34
	Thomson, H. L.....	Granville.....	4
	Yarter, C. M.....	Hudson Falls.....	6
Wayne.....	Brackett, G. T.....	Red Creek.....	3
	Frowley, Geo. J.....	Walworth.....	6
	Harris, L. L.....	Red Creek.....	8
	Merriam, C. C.....	Sodus.....	14
	Rich, John S.....	Marion.....	3
Westchester.....	Beaver, Gilbert A.....	Yorktown Heights.....	11
	Bigelow, N. A.....	Croton-on-Hudson.....	6
	Brewster, Robert S.....	Mount Kisco.....	15
	Cowdin, Winthrop.....	Mount Kisco.....	37
	Esberg, Henry.....	Purchase.....	1
	Fahenstock, Wm.....	Katonah.....	9
	Goodrich, David M.....	Mount Kisco.....	3
	Hammond, John Henry....	Mount Kisco.....	24
	Ophir Farm.....	Purchase.....	7
	Whitman, Clarence.....	Katonah.....	27
Wyoming.....	Barber, M. J.....	Silver Springs.....	7
	Barts, N. W.....	Strykersville.....	2
	Benedict, Fred G.....	Warsaw.....	1
	Coleman, Charles H.....	Perry.....	4
	Cone, R. H. & Scott, W. A..	Perry.....	3
	Cooper, Elmer W. & Son..	Perry.....	1
	Fisher, George F.....	Warsaw.....	5
	Scott, W. A. (See Cone, R. H.)		
	Taber, Est., H. E.....	Castile.....	45
	Toan, Charles H.....	Perry.....	27
	Towne & Fuller.....	Castile.....	1
Yates.....	Payne, Edgar S.....	Penn Yan.....	12
HEREFORD			
Chautauqua.....	Lewis, F. S.....	Ashville.....	14
Clinton.....	Schermerhorn, G. B.....	Keeseville.....	25
Onondaga.....	Foxton, H. C.....	Syracuse, R. D. 4.....	25
Rensselaer.....	Cottrell, Case.....	Hoosick Falls.....	10
Tompkins.....	Cornell University.....	I haca.....	4
New York.....	Blandy, Graham F..... (Herd in Virginia)	66 Broadway, New York...	65

HOLSTEIN FRIESIAN

County in which stock is located	Owner	Address	Number of animals
Albany.....	Bailey, John C.....	Westerlo, R. D.....	5
	Bradt, Frederick.....	Selkirk.....	3
	Cook, Dr. D. H.....	Albany.....	5
	Crounse, H. Wilson.....	Altamont.....	3
	Dugan, P. C.....	Altamont.....	10
	Haskin, Frank.....	Preston Hollow.....	4
	Henion, Mrs. Eugenia F....	Altamont.....	7
	Leonard, Gardner C.....	Altamont.....	1
	Lobdell, James W.....	Westerlo.....	1
	Mackey, Chas. H. & Son...	Medusa.....	18
	Tullock, Andrew J.....	Guilderland Center.....	10
Allegany.....	Abbott, E. R. & Son.....	Cuba.....	5
	Adams, W. C.....	Almond.....	16
	Alfred University.....	Alfred.....	16
	Allen, H. L.....	Rushford.....	25
	Austin & Chase.....	Andover.....	9
	Aylor, F. D.....	Belmont.....	11
	Baker, C. H.....	Friendship.....	5
	Ballard, J. A.....	Fillmore.....	5
	Barker, Jesse.....	Whitesville.....	1
	Barney, B. A. & Bro.....	Whitesville, R. D. 1.....	12
	Bassett, H. K. & Son.....	Andover, R. D. 2.....	9
	Black, Elmer E.....	Scio.....	45
	Blossom, E. S.....	Cuba.....	20
	Bruser, H. W.....	Centerville.....	15
	Burdick, Elno L.....	Alfred.....	6
	Burdick, Geo. A.....	Almond.....	2
	Burdick, T. G.....	Alfred Station.....	4
	Carnahan, Myron W.....	Friendship.....	1
	Carter, Roy M.....	Friendship.....	17
	Cass, D. M.....	Friendship.....	9
	Chamberlain, Roy W.....	Caneadea.....	11
	Chapman, I. S.....	Rushford.....	*11
	Clarke, E. E.....	Andover.....	45
	Clarke, H. M. & Son.....	Andover, R. D. 2.....	15
	Clarke, W. D.....	Andover.....	13
	Cline, Charles & Son.....	Belmont.....	6
	Cobb, Claire.....	Spring Mills.....	50
	Collins, C. R.....	Alfred Station.....	4
	Collins, M. S.....	Alfred Station.....	13
	Conley, Wilson & George...	Andover.....	5
	Conrade, F. W.....	Andover.....	14
	Cook, A. B.....	Andover.....	12
	Crandall, M. A. & Son.....	Andover.....	46
	Crandell, William R.....	Andover, R. D. 2.....	52
	Crittenden, Clarence L.....	Whitesville.....	21

* Including pure-breds not registered.

FIG. 22.—HEREFORD BULL, OWNED BY COTTRELL
VALLEY FARM, HOOSICK FALLS, N. Y.

FIG. 23.—A GROUP OF HOLSTEINS.

County in which stock is located	Owner	Address	Number of animals
Allegany.....	Crump, L. K.....	Friendship.....	9
	Curtis, Frank.....	Fillmore.....	3
	Davis, C. F.....	Andover.....	29
	Doan, A. H.....	Belmont.....	13
	Doan, Lewis H.....	Scio.....	5
	Dunn, Stanley.....	Black Creek.....	9
	Erickson, A. O.....	Andover.....	3
	Evans, David C.....	Angelica.....	6
	Fairbank, Charles W.....	Little Genesee.....	*57
	Ferry & Son, Elmer E.....	Almond.....	19
	Flint, J. W..... (Sunny Slope Farm)	Scio.....	7
	Foose, Isaac N.....	Belvidere.....	7
	Fuller Bros.....	Friendship.....	29
	Gillespie, L. C.....	Belmont.....	*20
	Gridley, Mrs. M. J., & Son.....	Alfred Station.....	14
	Hackett, L. O.....	Hume.....	5
	Hammond, C. N.....	Cuba.....	4
	Hanks, Otis A.....	Friendship.....	20
	Harbeck, Jay B., & Sons.....	Black Creek.....	29
	Hardy, Raymond A.....	Almond.....	5
	Hile, J. Clifton.....	Whitesville.....	13
	Hoey, Thos. E.....	Caneadea.....	*24
	Howard, Clayton A.....	Friendship.....	7
	Howe, A. D.....	Whitesville.....	21
	Hyland, Patrick.....	Andover.....	*8
	Jacox, Clarence.....	Andover.....	4
	James, E. T., & Son.....	Cuba, R. D. 5.....	14
	James, W. L.....	Rushford.....	7
	Johannes, Robert A.....	Fillmore.....	6
	Jordan, B. D.....	Cuba.....	2
	Karr, Leon M.....	Hornell.....	27
	Langworthy, D. L.....	Alfred Station.....	10
	Langworthy, W. H.....	Alfred Station.....	6
	Lee, F. M.....	Alfred Station.....	15
	Livermore, D. E. & L. C.....	Andover.....	3
	Lynch, John V.....	Wellsville.....	28
	Lynch, P. C., & Son.....	Andover.....	68
	Lynde, Grant R.....	Centerville.....	35
	Lyon, Archie.....	Black Creek.....	1
	McIntosh, A. L.....	Almond.....	6
	Miller, Elmer E.....	Almond.....	4
	Mills, A. R.....	Roesburg.....	18
	Morton, Chas.....	Almond.....	33
	Morton, Frank.....	Angelica.....	20
	Murdough, J. T.....	Oramel.....	13
	Nye, Frank T.....	Andover.....	6

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Allegany.....	Odell, F. J.....	Belmont.....	9
	Odell, L. H.....	Alfred Station.....	28
	Odell, Wm. C.....	Alfred.....	9
	Ostrander, Frank S.....	Almond.....	35
	Perry, L. C.....	Wellsville, R. D. 3.....	4
	Pettit, Claud E.....	Cuba.....	8
	Pierce, E. F.....	Alfred Station.....	6
	Pierce, Edwin N.....	Cuba.....	10
	Pierce, Frederick J.....	Alfred Station.....	7
	Potter, Albert S.....	Almond.....	20
	Potter, Oscar A.....	Andover, R. D. 2.....	10
	Potter, W. J.....	Andover, R. D. 2.....	3
	Randolph, Virgil F.....	Wellsville, R. D. 1.....	5
	Reynolds, G. C.....	Belmont.....	11
	Reynolds, G. M.....	Scio.....	6
	Reynolds, W. R.....	Whitesville.....	4
	Rice, Benj. J.....	Friendship.....	8
	Robinson, C. A.....	Andover.....	10
	Robinson, C. D.....	Friendship.....	19
	Rogers, C. F.....	Friendship.....	2
	Saunders, E. P.....	Alfred.....	9
	Sawyer, C. A.....	Friendship.....	2
	Seberry, R. B.....	Black Creek.....	47
	Shaughnessy, P. J.....	Wellsville.....	21
	Sisson, C. W.....	Alfred.....	8
	Sisson, E. E.....	Almond.....	14
	Smith, Fred.....	Whitesville, R. D. 1.....	4
	Smith, George.....	Whitesville.....	6
	Smith, Orange.....	Andover.....	11
	Snider Bros.....	Rosburg.....	25
	Stafford, Thos.....	Whitesville.....	6
	Sunny Slope Farm (See Flint, J. W.)		
	Swain, W. E.....	Swain.....	1
	Swartz, W. H.....	Oramel.....	5
	Thomas, Elba.....	Scio, R. D.....	2
	Thomas, L. C.....	Black Creek.....	34
	Thompson, C. R.....	Wellsville.....	19
	Tuttle, Howard.....	Friendship.....	5
	Utter, Homer.....	Cuba.....	61
	Vincent, L. M.....	Cuba.....	17
	Wahl, William.....	Andover.....	18
	Waldock, Z. J.....	Cuba.....	1
	Wales, L. M.....	Black Creek.....	15
	Watson, Geo. M.....	Scio.....	10
	Wells, John.....	Friendship.....	36
	Wells, Justin.....	Black Creek.....	12

County in which stock is located	Owner	Address	Number of animals
Allegheny.....	Wells, W. S. & Son.....	Fillmore.....	5
	White, B. D.....	Caneadea.....	1
	Whitford, Schuyler S.....	Alfred Station.....	20
	Williams, Daniel H.....	Houghton.....	11
	Williams, Nathan.....	Wellsville.....	33
	Wilson, J. A. & Son.....	Houghton.....	5
	Wingert, J. H.....	Caneadea.....	53
	Witter, E. H.....	Cuba.....	46
	Woodworth, E. E.....	Alfred.....	16
	Woodworth, Ora E.....	Alfred Station.....	3
Broome.....	Abbey, Earl S.....	Windsor.....	15
	Adams, Elmer.....	Castle Creek.....	1
	Barner, Duane.....	Whitney Point.....	3
	Barnett, R. E.....	Harpursville.....	1
	Beilby, Glenn H.....	Deposit.....	5
	Binghamton State Hospital.	Binghamton.....	1
	Butterfield, Lewis W.....	Binghamton, R. D. 4.....	34
	Campbell, E. L.....	Conklin.....	2
	Capron, Robert K.....	Lisle.....	20
	Carley, Ira D.....	Lisle.....	4
	Casey, E. M.....	414 Security Mutual Life Bldg., Binghamton.....	18
	Clark, Jerome & Son.....	Nineveh.....	7
	Crane, A. L.....	Sanford.....	13
	DeMond & Pairce.....	Marathon.....	4
	Driscoll, Arthur D.....	Whitney Point.....	5
	Edmistu, E. L.....	Lisle.....	3
	Emerson, L. J.....	Johnson City, R. D. 1.....	*11
	English, G. R.....	Whitney Point.....	9
	Farley, D. H. & Son.....	Castle Creek.....	31
	Frank, Edward J.....	Deposit.....	1
	Gage, Minor.....	Union.....	2
	Hillcrest Farms.....	Binghamton.....	8
	Jeffords, H. A.....	Whitney Point.....	10
	Kinney, E. T.....	Lisle.....	5
	Kinney, J. W. & Son.....	Port Crane.....	1
	McLean, Joseph.....	Center Village.....	46
	Maloney Bros.....	Whitney Point.....	20
	Marks, Chas. B.....	Lisle.....	15
	Mead, Mrs. G. A.....	Tunnel.....	6
	Merrill, Alfred M.....	Harpursville.....	5
	Merrill, Wm. C.....	North Sanford.....	8
	Opel, George R.....	McClure.....	1
	Osborn & Son, Geo. F.....	Windsor.....	4
	Peabody, F. H.....	Vestal.....	2
	Pitcher, A. R.....	Maine.....	11
	Prentice, M. M.....	Itaska.....	3

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Broome.....	Richardson, E. J.....	Killawog.....	2
	Root, Dr. R. T.....	120 Main St., Binghamton..	8
	Smith, Alex W.....	Deposit.....	8
	Spencer, A. M.....	Lisle, R. D. 1.....	4
	Tappan, Watson.....	Glen Aubrey.....	4
	Thomson, F. W. & L. A....	Sanford.....	15
	Walling, Albert A.....	Tunnel.....	6
	Whitney Point Stock Farm Co.....	Whitney Point.....	111
	Woodruff, F. E.....	Binghamton.....	5
	Woodruff, F. E.....	Binghamton.....	5
Cattaraugus.....	Agett, Henry G., & Son....	Franklinville.....	*4
	Allen, B. H.....	Dayton.....	1
	Allen, Wm. H., & Sons....	Franklinville.....	28
	Ames, Guy C.....	Franklinville.....	19
	Bartlett, E. L.....	Olean, R. D. 2.....	5
	Bensley, M. F.....	Buffalo.....	29
	Berger, Miles.....	Salamanca.....	43
	Burdick, S. G.....	Otto.....	50
	Carnahan, M. W., & Sons..	Elko.....	1
	Carpenter & Carpenter....	East Randolph.....	10
	Caswel, Guy C.....	Randolph.....	10
	Cheney & Bard.....	Franklinville.....	27
	Cleveland, Arthur E.....	Olean.....	1
	Cole, C. L.....	Perrysburg.....	*13
	Courter, A. S.....	Otto.....	42
	Crosby, E. H., & Son.....	Hinsdale.....	*16
	Decker, D. D., & Son.....	South Dayton.....	40
	Ditcher, Mrs. Elsie A.....	Little Valley, R. D. 1.....	5
	Fancher, F. T.....	Salamanca.....	175
	French, Homer B.....	Ashford.....	7
	Gere, E. A., & Son.....	Cuba.....	7
	Grandusky, A. J.....	Olean.....	26
	Grierson, E. J.....	Franklinville.....	21
	Griffin, Charles.....	Salamanca, Box 393.....	10
	Haase, A. V.....	Allegany.....	1
	Hall, Glen W.....	Dayton.....	26
	Hall, J. W.....	Perrysburg.....	8
	Harris, Allen.....	Great Valley.....	7
	Hitchcock, C. D.....	East Randolph.....	6
	Hoag, William C.....	Salamanca.....	13
	Hoefler & Dorsey.....	Leon.....	13
	Horton, Sidney D.....	Salamanca.....	51
	Howlett, A. M.....	South Dayton.....	9
	Hubbard, George.....	Randolph.....	21
	Jaquish, E. D.....	Elton.....	1
	Jones, W. W.....	Dayton.....	36
	Kirkland, Leigh G.....	Randolph.....	20

* Including pure-breds not registered.

CATTLE — HOLSTEIN FRIESIAN

377

County in which stock is located	Owner	Address	Number of animals
Cattaraugus	Leach, George	Randolph	1
	Leggett, F. T.	Ellicottville	*8
	Limbocker, Lloyd L.	Conewango Valley	10
	Linderman, N. B.	Ischua	31
	McElwain, John A.	Conewango Valley	6
	McElwain, Samuel F.	Conewango Valley	20
	Martin, W. P., & Son	Delevan	30
	Merrill, Lee L.	South Dayton	15
	Mighells, Elliott C.	Randolph	14
	Miller, S. N.	East Randolph	10
	Mitchell, Matthew	Franklinville	9
	Myers, L. H.	Conewango Valley	*34
	Newman, Charles H.	Sandusky	7
	O'Brien, James P.	Ellicottville	15
	Parke, Lester A.	South Dayton	23
	Parker, John, & Sons	Salamanca	15
	Paschen, August	Little Valley	9
	Peavy, S. A.	Franklinville	*11
	Peckham, E. M.	Yorkshire	16
	Phillips, C. B.	Ellicottville	1
	Pool, Irvin	Conewango Valley	9
	Raiber, W. A.	Great Valley	7
	Rhoades, W. M.	Conewango Valley	12
	Robinson, Grant B.	Portville	17
	Schuppenhauer, Henry	Randolph	16
	Scott, Robert L.	South Dayton	15
	Scudder, Antoinette	Randolph	17
	Seager, Chas. H.	Conewango Valley	7
	Seager, Frank L.	Randolph	1
	Sibley, Herbert D.	Olean	40
	Simms, Wallace S.	Ashford	3
	Smith, W. J.	South Dayton	1
	Stanford, F. J.	Randolph	7
	Thompsett, R. W., & Son	Delevan	*3
	Vincent, Ann A.	South Dayton	1
	Walker & Bull	Randolph	85
	Warner, Corel A.	South Dayton	1
	Watenpaw, H. F.	Kennedy	4
	Whipple, D. E.	Little Valley	14
	Williams, C. L.	Ashford	1
	Wilson, D. A.	Great Valley	16
	Woodin H. E., & Son	Dayton, R. D.	15
	Wright, Charles E.	Franklinville	9
	Wyllys, H. A.	Randolph	6
	Young, J. J.	Randolph	1
Cayuga	Andrews, B. B.	Weedsport	135
	Arnold, E. J.	Moravia	21

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Cayuga.....	Arnold, Norman G.....	Venice Center.....	18
	Avery, Jas.....	Aurora.....	5
	Bishopp, Mrs. Francis.....	Auburn.....	5
	Boyce, John L.....	Locke.....	13
	Brock & Jenks.....	Genoa.....	10
	Collier, Henry A.....	Locke.....	21
	Cook, Reuben.....	Locke.....	6
	Coomber, Robert.....	Merrifield.....	15
	Corey, John W.....	King Ferry.....	*4
	Crossman, H. D.....	Weedsport.....	16
	Cruthers & Mott.....	Locke.....	16
	Culver, John A.....	Martville.....	4
	Day, Albert.....	Auburn, R. D. 8.....	9
	Dean Farms, The, Inc.....	Auburn.....	*15
	Depew, W. H.....	Auburn, R. D. 6.....	33
	Eldredge, C. A.....	Auburn, R. D. 5.....	4
	Fessenden, Edwin S.....	King Ferry.....	6
	Folts, Clinton I.....	Locke.....	4
	Gould, James A.....	Venice Center.....	11
	Gutchess, Louis W.....	Port Byron.....	10
	Hall Bros.....	Cortland, R. D. 7.....	10
	Hart, Charles M.....	Locke, R. D. 20.....	15
	Hart, E. S.....	Moravia.....	*5
	Herrington, Don J.....	Cato.....	*14
	Hicks, George W.....	Auburn.....	18
	Hunter, E. C.....	Merrifield.....	24
	Hunter, Howard H.....	Ensenore, R. D.....	14
	Jarvis, Henry K.....	Weedsport.....	67
	Johnson, Elmer C.....	Moravia.....	12
	Mason, Lowell, & C. Leslie.....	Genoa.....	10
	Mitchell, C. P.....	Union Springs.....	7
	Nutt, Coral D.....	Union Springs.....	12
	Parsell, C. E.....	Auburn.....	12
	Sexauer, Fred H.....	Auburn, R. D. 3.....	2
	Sherman, W. T.....	Moravia.....	31
	Simmons, George S.....	Sterling Station.....	6
	Stoyell, H. Arthur.....	Locke.....	5
	Streeter, C. S.....	Cato.....	3
	Struble, D. L.....	Port Byron.....	18
	Tabor, Claire J.....	Meridian.....	8
	Taylor, Frank.....	Moravia.....	*5
	Tennant, E. M.....	Moravia, R. D. 16.....	4
	Tucker, Harry J.....	Sennett.....	9
	Voorhees, Sheldon.....	Auburn.....	*18
	Wait Farm, The (See Wait, H. A. & J. A.).		
	Wait, H. A. & J. A.....	Auburn.....	40
	(The Wait Farm)		

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Cayuga.....	Wheat, Elmer.....	Venice Center.....	17
	Wheat, L. M., & Co.....	Moravia.....	22
	White, J. L., & Son.....	Locke.....	50
	Woodward, H. E.....	Ensenore.....	40
Chautauqua.....	Allen, M. L.....	Jamestown, R. D. 83.....	4
	Babcock, H. L., & Son.....	Forestville.....	4
	Bagg, M. L.....	Ellington.....	1
	Bement, W. J.....	Sherman.....	5
	Blaisdell, A. H.....	Cherry Creek.....	25
	Brace, R. E.....	Kennedy.....	25
	Brookman, Carl.....	Cherry Creek.....	2
	Brown, G. W.....	Cherry Creek.....	39
	Brown, H. C.....	Forestville.....	11
	Butts, A. J. & Geo. N.....	211 Main St., Jamestown...	3
	Cadwell, G. W.....	Bemus Point.....	5
	Cass, Rollin F.....	Frewsburg.....	8
	Chase, Glenn H.....	Gerry.....	15
	Cobb, E. M.....	Sinclairville.....	22
	Cowles, George S.....	Ashville.....	24
	Crandall, Frank W.....	Westfield.....	6
	Crawford, T. J.....	Kennedy.....	1
	Cumings, John H.....	Sinclairville.....	16
	Dawley, L. J.....	Silver Creek.....	20
	Dix, James E.....	Silver Creek.....	7
	Dye, Ernest B.....	South Dayton.....	41
	Eddy, Martin C.....	Ashville.....	3
	Fairbanks, Owen W.....	Ellington.....	1
	Forbes, Grant.....	Jamestown.....	16
	Forbes, Mead.....	Frewsbury.....	3
	Forbes, Ray.....	Jamestown.....	1
	Fowler, R. A.....	Cherry Creek.....	20
	Franklin, D. J.....	Cherry Creek.....	18
	Giles, Frank.....	Forestville.....	7
	Gleason, A. Lincoln.....	Ashville.....	35
	Greenwood, John W., & Sons.....	Jamestown, R. D. 79.....	*16
	Haines, S. B.....	North Clymer.....	3
	Hall, John P.....	Sherman.....	10
	Halladay, Fletcher J.....	Jamestown.....	22
	Hasen, George E., & Son... ..	Sherman.....	5
	Holcomb Bros.....	Westfield.....	3
	Hopkins, B. J.....	Westfield.....	20
	Howard, Frank L.....	Stockton.....	1
	Hoyt, C. D.....	Bemus Point.....	23
	Huntley, W. R., & Son.....	N. Clymer.....	4
	Kirkland, George A.....	Dewittville.....	32
	Kuhrt, Reuben E.....	Forestville.....	6
	Langford, E. R.....	Jamestown.....	9

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Chautauqua.....	Langworthy, Richard.....	Gerry.....	4
	Libby, C. M.....	Forestville.....	12
	Lindquist, Chas. & Gust....	Jamestown.....	20
	Longhouse, Howard H.....	Dunkirk.....	9
	McAdam, John, & Son.....	Jamestown, R. D.....	17
	Mann, Mrs. J. E.....	Clymer.....	15
	Meehan, W. J.....	Kennedy.....	9
	Markham, W. L.....	Hamburg.....	19
	(Farm at Kennedy)		
	Merz, Frank.....	Jamestown.....	19
	(Sunnyside Farm, Sinclairville)		
	Miller, Harry.....	Sherman.....	1
	Norman, A. J.....	Sinclairville.....	10
	Parker, V. W.....	Westfield.....	1
	Peterson, C. E.....	Jamestown.....	12
	Peterson, F. G.....	Frewsburg.....	4
	Phelan, James.....	Forestville.....	55
	Pringle, Benjamin.....	Mayville.....	40
	Pringle, James.....	Ashville.....	2
	Pritchard, W. W.....	Cherry Creek.....	13
	Raspas, William.....	North Clymer.....	6
	Rexford, Russell D.....	Bemus Point.....	12
	Reynolds, A. E.....	Corry, Pa.....	1
	Reynolds, Herbert I.....	Kennedy, R. D. 73.....	5
	Ricker, George W.....	Ashville.....	*9
	Robinson, E. S.....	Forestville.....	6
	Rublee, A., & Son.....	Ellington.....	9
	Ryder, W. A., & Son.....	Cassadaga.....	2
	Seekins, Charles A.....	Ellington.....	2
	Shattuck, J. F.....	Cherry Creek.....	5
	Stearns, Lester F.....	Dunkirk.....	3
	Sternberg, S. T.....	Sherman.....	15
	Stowell, F. W.....	Bemus Point.....	16
	Sunnyside Farm (See Merz, Frank).		
	Taylor, E. S.....	Ripley.....	3
	Tompsett, Charles T.....	Gerry.....	13
	Traver, J. G.....	Frewsburg.....	5
	Waite, Arthur.....	Kennedy.....	1
	Waite, Charles A.....	Cassadaga.....	26
	Walldorf, Henry, & Son....	Dunkirk.....	13
	Warren, Arthur G.....	Conewango Valley.....	5
	Wheeler, Grant D.....	Cherry Creek.....	50
	Wheeler, S. J.....	Kennedy.....	17
	Wheelock, Frank.....	Kennedy, R. D. 72.....	4
	White, J. B.....	Bemus Point.....	57
	Wilcox Bros.....	Cherry Creek.....	1
	Wilcox, Gerry H.....	Cherry Creek.....	2
	Wilder & Sadd.....	Mayville.....	74

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Chautauqua.....	Wilson, Charles.....	Forestville.....	21
	Wilson, John D.....	Ashville.....	33
	Wood, D. G.....	Bemus Point.....	5
Chemung.....	Baldwin & Moore.....	Elmira.....	6
	Brewer, A. D.....	Breesport.....	10
	Copley, John G.....	Lowman.....	1
	Dalrymple, Jesse E.....	Horseheads.....	5
	Elliott, Frank S. & Little, Gould J.....	Lowman.....	9
	Elston & Courtright.....	Lowman.....	10
	Farr, W. E.....	Big Flats.....	9
	Gray, Frank.....	Lowman.....	1
	Gregory, F. E., & Bro.....	Van Etten.....	*4
	Gregory, John F.....	Elmira, R. D. 4.....	1
	Hanford, George.....	Elmira.....	*17
	Holbert, T. B.....	Elmira.....	30
	Hock, William.....	Elmira Heights.....	3
	Hough Bros.....	Elmira, R. D. 2.....	1
	Joslin Bros.....	Chemung.....	30
	Kahler, Oscar.....	Elmira, R. D. 1.....	14
	Little, Gould J. (See Elliott, Frank S.)		
	Loid, Daniel.....	Big Flats.....	27
	Lowman, E. M.....	Lowman.....	9
	Lowman, E. M. & Roe, Dudley C.....	Lowman.....	37
	Mallory & Little.....	Horseheads.....	1
	Mallory, John H.....	Horseheads.....	*18
	Martin, Carl F.....	Big Flats.....	12
	Murphy, John C.....	Horseheads.....	8
	New York State Reforma- tory.....	Elmira.....	2
	Peck, Van Buren.....	Lowman.....	1
	Rhodes, E. W.....	Elmira, R. D. 1.....	5
	Roe, Dudley C. (See Low- man, E. M)		
	Scudder Bros.....	Elmira.....	4
	Shappel, Grant.....	Horseheads.....	2
	Taber, Charles F.....	Horseheads.....	2
	Thomas, Henry, & Son Co..	Horseheads.....	18
	Turner, G. Archie.....	Horseheads.....	6
	Wells, Grover.....	Waverly.....	1
	Whitney, George G.....	Horseheads.....	1
	Wolcott, C. S.....	Elmira, R. D. 1.....	7
Chenango.....	Adams, George A.....	North Norwich.....	40
	Aldrich, Jay C.....	Norwich, Star Route.....	5
	Allen, Charles C.....	Greene.....	26
	Backus, W. M.....	New Berlin.....	3

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Chenango.....	Baldwin, A. P.....	Pitcher.....	7
	Barber, Edward B.....	Oxford.....	13
	Barber, J. E.....	Oxford.....	2
	Barnes, C. E.....	Oxford.....	22
	Barrows, Porter E.....	Sherburne.....	*15
	Bates, J. De Vern.....	Greene.....	4
	Beach, Fred.....	South Otselic.....	4
	Beardslee, J. D.....	New Berlin.....	11
	Boos, C. H.....	Sherburne.....	25
	Briggs, J. A..... (Cedarhurst Stock Farms)	Earlville.....	37
	Brown, P. M.....	Binghamton.....	6
	Brown, Ralph R.....	South Otselic.....	20
	Browning, H. H.....	Plymouth.....	2
	Buell, Otto A.....	Sherburne.....	14
	Bullock, W. B.....	Sherburne.....	24
	Butts, Bert J.....	Sherburne.....	70
	Calvert, E. M.....	Georgetown, R. D.....	1
	Campbell, Charles E.....	Sherburne.....	69
	Campbell, Samuel.....	Beaver Meadow.....	8
	Casey, William.....	Sherburne.....	18
	Caswell, Floyd J.....	New Berlin.....	8
	Cedarhurst Stock Farm (See Briggs, J. A.).		
	Clark, C. Emmet.....	New Berlin.....	51
	Clark, E. B.....	Sherburne.....	20
	Collier, Harvey.....	North Norwich.....	5
	Corbin, Ralph.....	Bainbridge.....	40
	Coye, Clarence J.....	Earlville.....	46
	Dalrymple, David B. H.....	Otselic.....	45
	Davidson, Frank E.....	Sherburne.....	40
	Day, Calvin.....	New Berlin.....	26
	Day, Emerson.....	New Berlin.....	16
	Dilley, J. A.....	New Berlin, R. D. 2.....	6
	Downey, Timothy.....	Oxford.....	*2
	Duroe, C. R.....	New Berlin.....	6
	Duroe, E. A.....	New Berlin.....	21
	Dwight, Will.....	South Otselic.....	36
	Edgerton, W. H.....	Greene.....	3
	Evans, Ellen.....	New Berlin.....	2
	Follett, Frank D.....	Norwich.....	*14
	Follette, Whitman A.....	North Norwich.....	45
	Franklin, Horace D.....	Oxford, R. D. 2.....	1
	Gates, George S.....	Lincklaen Center.....	13
	Gibson, Eugene.....	Smyrna.....	11
	Gile, Leon.....	New Berlin.....	8
	Goodnow, Darwin E.....	South New Berlin.....	11
	Gould, Joseph A.....	South New Berlin.....	2

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Chenango	Griffin, M. C.	Oxford	25
	Harrington Sisters	Sherburne	49
	Harrington, Ralph	Greene	23
	Hibbard, R.	Pharsalia	18
	Hill, Linn W.	Greene, R. D. 1	23
	Hills, Emmett A.	Smyrna	9
	Hitchman, E. B.	Norwich	36
	Hofmann, Ludwig	Smithville Flats	1
	Hoffman, Charles	Guilford	16
	Howard, Horatio S.	Sherburne	7
	Howard, John M.	Sherburne	96
	Hovey, F. G.	Guilford	19
	Hull, Walter E.	Sherburne	1
	Hull, Willis T.	Sherburne	*10
	Humphrey, Benj. M.	Sherburne	*5
	Ives, Otto L.	Guilford	80
	Jaquay, C. D.	South Edmeston	7
	Kershaw, Herbert J.	Sherburne	21
	Knapp, H. J.	Sherburne	10
	Kutschback, R. P., & Son	Sherburne	90
	Lathrop, Henry, & Sons	Sherburne	93
	Maynard, W. J.	Smyrna	31
	Meek, Ralph C.	Oxford	*7
	Moot, Arthur	Lincklaen	10
	Mowry, John H.	Sherburne	2
	Musson, Arthur H.	Mt. Upton	10
	Neidlinger, Fred	Bainbridge	5
	Newton, Alanson T.	South Plymouth	20
	Newton, La Vette L.	South Otselic	7
	Nye, Claude (See Thornton, M. E.)		
	Parker, Ray W.	Coventry	3
	Paye, Thomas A.	New Berlin	57
	Phetteplace, Gurdon E.	Norwich	1
	Phille, C. A.	Afton	25
	Pike, H. J.	Norwich	5
	Powell, E. H.	Plymouth	50
	Pudney, Frank E.	Sherburne	9
	Pudney, Walter E.	Sherburne (R. D. 3, West Hill)	3
	Raider, John	South Otselic	15
	Richer, DeWitt	Otselic	9
	Robinson, H. A., & Sons	South New Berlin	20
	Rogers, Emma J., & Willcox, M. K.	Oxford, R. D. 2	25
	Rowe, L. H.	Sherburne	7
	Roys, J. W.	Oxford	1

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Chenango.....	Russell, A. E.....	Smyrna.....	8
	Sabin, Alfred C.....	Sherburne.....	15
	St. John, E. R.....	Afton.....	*15
	Sargent, E. A.....	South New Berlin.....	6
	Sarle, C. F.....	New Berlin.....	3
	Saunders, F. E.....	Lincklaen Center.....	23
	Sexton, W. H.....	Smyrna.....	20
	Shepardson, Stokes.....	Smyrna.....	17
	Sherman, Ira L.....	South Otselic.....	15
	Sholes, Floyd C.....	New Berlin.....	18
	Sholes, Jay.....	New Berlin.....	10
	Sisson, Clayton.....	Sherburne.....	63
	Skinner, Frank.....	Norwich, R. D. 3.....	*13
	Slater, B. E.....	Norwich, Star Route.....	2
	Smith, F. C.....	Guilford.....	4
	Smith, Leland B.....	Oxford.....	12
	Sprague, F. B. & W. P.....	Smyrna.....	25
	Spurr, T. W.....	New Berlin.....	12
	State Department of Agri- culture.....	Albany.....	10
	Steere, Archie W.....	Oxford.....	13
	Sternberg, E. W.....	Sherburne.....	*18
	Thompson, A. Jay.....	Sherburne.....	12
	Thornton, M. E. & Nye, Claude.....	Norwich.....	20
	Tobey, E. P.....	Smyrna.....	7
	Totman, W. D.....	Norwich, R. D. 4.....	5
	Tuttle, C. H.....	Norwich.....	*29
	Tuttle, Ziba L.....	Smyrna.....	*12
	Van Housen, C. B.....	Sherburne.....	7
	Van Wagner, S. D.....	Sherburne.....	16
	Wadsworth, C. B.....	Mt. Upton.....	2
	Wales, Addison.....	Plymouth.....	23
	Weiler, John J.....	Sherburne.....	16
	White, Irvin H.....	Guilford.....	15
	Wigsten, F. A.....	Elmira.....	7
	Willcox, H. H.....	Earlville.....	13
	Willcox, M. K. (See Rogers, Emma J.)		
	Willcox, S. K.....	Smyrna.....	32
	Williams, F. E.....	Earlville.....	5
	Wilson, George L.....	Guilford.....	4
	Women's Relief Corps Home	Oxford.....	2
	Zoerb, M. K.....	Guilford.....	6
Clinton.....	Alford, S. R.....	Mooers Forks.....	*3
	Arnold & Stafford.....	Peru.....	17
	Averill, James, jr. & Pelkey, J. & J.....	Champlain.....	9

* Including pure-breds not registered.

CATTLE — HOLSTEIN FRIESIAN

385

County in which stock is located	Owner	Address	Number of animals
Clinton.....	Barber, Ruth, Exec.....	Plattsburgh.....	10
	Blake, Fred D.....	West Chazy.....	1
	Bragg, H. H.....	Peru.....	5
	Clark, S. H.....	Peru.....	8
	Coolidge & Holden.....	Ellenburg Center.....	8
	Cromie, J. W. & Son.....	Peru.....	3
	Day, S. A.....	Peru.....	11
	De Loria, Jesse.....	West Chazy.....	6
	Fee, Kenneth F.....	Mooers.....	2
	Fuller, H. T.....	Peru.....	31
	Heart's Delight Farm.....	Chazy.....	66
	Jerry, Vincent S.....	West Chazy.....	3
	Mace, R. T.....	Keeeseville.....	5
	McMartin, W. A.....	Plattsburg.....	12
	Miner, C. L.....	Plattsburg, R. D. 2.....	10
	Miner, W. H. (See Heart's Delight Farm)		
	Moffitt, John H.....	Plattsburg.....	20
	Napper, John.....	Saranac.....	4
	Pelkey, J. & J. (See Averill, J., jr.).		
	Powers Bros.....	Cadyville.....	5
	Rea, Chas. D.....	West Chazy.....	2
	Rea, George H.....	Plattsburg.....	3
	Ryan & Plumley.....	Ellenburg.....	1
	Sawyer, Harry.....	Ellenburgh.....	4
	Sheldon, I. L.....	Ellenburg Depot.....	50
	Smith, F. L.....	East Beekmantown.....	2
	White, William S.....	Cadyville.....	3
	Wright, R. J.....	Ellenburg.....	1
Columbia.....	Barnes, Thurlow Weed, jr..	Niverville.....	3
	Berninger, Augustus C.....	Ghent.....	1
	Brousseau, Hannah Parker..	Schodack Landing.....	5
	Carlton, W. G.....	Copake.....	8
	Firemen's Home.....	Hudson.....	28
	Goodrich, F. C.....	East Chatham.....	*23
	Halliday, C. W.....	North Chatham.....	25
	Hartman, John W.....	Chatham, R. D. 1.....	15
	Haun, W. H.....	Hillsdale.....	3
	Irish, L. W.....	Niverville.....	2
	Miller, Clifford L.....	Claverack.....	3
	Nichols, Harry D.....	Canaan.....	10
	Niver, Henry.....	Hillsdale.....	16
	Phillips, W. H.....	East Chatham.....	10
	Rivenburg, S. R.....	Malden Bridge.....	12
	Rossman Brothers.....	Martindale.....	17
	Sherman, Frank.....	Copake.....	35

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Columbia.....	State Farm for Women.....	Valatie, Box 415.....	3
	Stickles, H. H.....	Claverack.....	30
	Yung Brothers.....	Germantown, R. D.....	27
Cortland.....	Abbott, G. A.....	Cortland.....	125
	Albro, Wm. H.....	Cuyler.....	1
	Allen, Barton D.....	Marathon, R. D. 3.....	3
	Beard, R. H.....	Cortland.....	112
	Blanchard, Frank A.....	Cortland.....	26
	Bosworth, W. J.....	Cuyler.....	4
	Bowker, Charles E.....	Cortland, R. D. 5.....	8
	Brink, Sheldon E.....	Marathon.....	*18
	Bronson, Horace L.....	Cortland, Box 24.....	40
	Burnham, F. L.....	Little York.....	17
	Butler, Ralph A.....	Cortland.....	25
	Button, C. H.....	Cortland, R. D. 7.....	3
	Carr, Cassius L.....	Harford Mills.....	10
	Carter, Frank G.....	Marathon, R. D. 1.....	12
	Clark, Edward Z.....	Cuyler.....	19
	Conrad, Lester.....	Marathon.....	10
	Cook, F. L.....	Cincinnatus.....	12
	Corning, L. H.....	Cortland.....	10
	Crane, Thomas.....	Cincinnatus.....	16
	Dain & Jenkins.....	Cortland.....	12
	Dillenbeck, M. H.....	East Freetown.....	7
	Ellis, C. W., jr.....	Cortland.....	60
	Ellis, C. W., sr.....	McGraw.....	27
	Fish, P. D.....	East Freetown.....	10
	Foster, I. J.....	Homer.....	21
	(See also Vail & Foster)		
	Gallup, O. P.....	Homer.....	10
	Griswold, John C.....	Cortland.....	*10
	Hammond, Samuel D.....	Marathon.....	17
	Hart, Mrs. Sarah T.....	Union Valley.....	16
	Harvey, E. E.....	Cincinnatus.....	60
	Harvey, L. E.....	Marathon.....	8
	Heath, Henry R.....	McGraw.....	*10
	Henry, F. M.....	East Homer.....	3
	Holl, Jerome A.....	Cortland.....	15
	Holtmart, George T.....	Willet.....	3
	Humphries, C. E.....	McGraw.....	1
	Hyde, G. H.....	Cortland.....	13
	Jones, Burt D.....	Marathon.....	32
	Jones, John W.....	Willet.....	26
	Jones, Ralph G.....	Cortland.....	8
	Keeney, H. W.....	Cuyler.....	5
	Kenfield, A. J.....	McGraw.....	2
	Knapp, A. A.....	Preble.....	37

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Cortland	Leach, J. A.....	Cortland.....	100
	Lampher, R. W.....	McGraw.....	*5
	Mark, John.....	Cortland, R. D. 7.....	4
	Maxson, F. M.....	Homer, R. D. 3.....	2
	Merihew, Elmer T.....	Marathon.....	2
	Mudge, Harry.....	East Freetown.....	7
	Mynard, E. M.....	East Homer.....	14
	Paige, C. N.....	Marathon.....	3
	Price, Frank E.....	Cortland.....	30
	Randall, Wilbur B.....	Cincinnati.....	2
	Reagan, E. D.....	Messengerville.....	20
	Reed Bros.....	Cortland.....	10
	Rindge, E. C.....	Cortland.....	60
	Rose, E. B.....	Homer.....	5
	Root, Wm. W.....	Preble.....	14
	Rowe, A. R., & Son.....	Truxton.....	8
	Simmons, F. L., & F. G.....	Cortland.....	11
	Snell, Mrs. Darius.....	Blodgett Mills.....	7
	Squires & Leet.....	Marathon.....	10
	Stafford, Henry.....	McGraw.....	3
	Stafford, Reuben.....	Cortland.....	10
	Stanton, D. J.....	Cincinnati, R. D. 4.....	1
	Stevens, Paul H.....	Cortland.....	25
	Stewart, A. H.....	Harford.....	18
	Stoppard, W. B.....	Cortland.....	*10
	Sweetland, William.....	Cortland.....	27
	Tarbell, Bert.....	Marathon.....	4
	Tarbell, W. N.....	East Freetown.....	1
	Thompson, F. E.....	Cortland, R. D. 6.....	2
	Tyler, J. H.....	Harford.....	10
	Underwood, J. B.....	Homer.....	4
	Vail, H. A. & Foster, I. J.....	Homer.....	23
	Vail, Harrison A.....	Homer.....	3
	Voorhees, W. M.....	Harford.....	23
	Wadsworth, Frank.....	McGraw.....	34
	Wavle, E. H. & F. P.....	East Freetown.....	28
	Webster & Wadsworth.....	Cortland.....	25
	Wightman, Homer.....	Marathon.....	6
	Wilson, Earl G.....	Dryden.....	20
	Woodward, W. A.....	Cortland, R. D. 1.....	*18
Delaware	Archibald, J. S.....	Margaretville.....	2
	Bailey, F. E.....	Deposit.....	20
	Birdsall, Van D.....	East Masonville.....	15
	Chambers, J. A.....	Hamden.....	9
	Chambers, Peter.....	Walton.....	38
	Dann, Fred A.....	Walton.....	3
	Dann, Frank W.....	Walton.....	9

*Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Delaware.....	Every Brothers.....	Bloomville.....	64
	Every, G. T.....	Bloomville.....	25
	Faulkner, E. E.....	New Kingston.....	16
	Fitch, Clifford B.....	Walton.....	10
	Fox, Henry C.....	Oneonta, R. D. 3.....	1
	Gould, C. C.....	Hobart.....	55
	Harrison, Chas.....	East Masonville.....	6
	Hoyt, W. M.....	Walton, R. D. 3.....	2
	Hyners, C. S.....	De Lancey.....	5
	Jenkins, Mrs. Nathan.....	Walton.....	8
	Kelly, M. H.....	Roxbury.....	13
	McClintock, S. C.....	Franklin.....	1
	McDowell, John.....	Fraser.....	19
	Macfarlane, R. B.....	Delhi.....	5
	McNair, Mayme B.....	Andes.....	8
	Montross, Geo. L.....	Deposit.....	19
	Myers, William S.....	Sidney.....	1
	Plankenhorn, Herman.....	Delhi.....	20
	Pomeroy, Fred, & Son.....	Sidney Center.....	17
	Rensma, Jos. G.....	Walton, R. D. 2.....	23
	Risley, E. E.....	Walton.....	120
	Rowell, A. W.....	Franklin.....	5
	Rutherford, James I.....	Delancey.....	4
	Sagendorf, C. W.....	Sidney Center.....	18
	Salton, H. D.....	Walton.....	5
	Seely, W. S.....	Walton.....	1
	Shaw, Leonard G.....	Delhi.....	6
	Siver, R. W.....	Sidney.....	72
	State Department of Agri- culture.....	Albany.....	8
	Stevens, Geo., & Son.....	Stamford.....	12
	Tobey, M. N.....	East Meredith.....	52
	Utter, Robert N.....	Walton.....	2
	Vandervort, E. A.....	Sidney.....	40
	Vandervort, J. H., & Son.....	Sidney Center.....	39
	Vandervort, Zilpha E.....	Sidney.....	1
	Van Kleeck, C. C.....	Franklin.....	3
	Waterman, George B.....	Delhi.....	42
	Welcher, C. E.....	Unadilla.....	17
	White, A. L.....	Walton, R. D. 3.....	5
Dutchess.....	Abel, Claude.....	Verbank.....	1
	Allen, H. N.....	Pawling.....	7
	Baldwin, W. N.....	Pawling.....	14
	Ballard, Homer E.....	Stormville.....	8
	Benedict, F. E.....	La Grangeville.....	3
	Bergh, John S.....	Jackson Corners.....	8
	Bockee, Jacob.....	Amenia.....	3
	Boice, C. W.....	Arlington.....	31

County in which stock is located	Owner	Address	Number of animals
Dutchess.....	Brady, Paul T.....	Pawling.....	225
	Brill, Jacob S.....	Poughquag.....	60
	Chaffee, Edward J.....	Wassaic.....	18
	Clark, H. L.....	Millerton.....	26
	Davis, W. H.....	Millbrook.....	10
	Denton, Frank A.....	Wingdale.....	2
	Dutcher, J. Gerow..... (Maplecroft Farms)	Pawling.....	30
	Feroe, H. C.....	Tivoli.....	2
	Fletcher, C. L., & Son.....	Dover Plains.....	14
	Fraleigh, H. D.....	Tivoli.....	37
	Gidley, Henry E.....	Moore's Mill.....	4
	Haight, Delano.....	Bangall.....	*60
	Ham, Eugene.....	Verbank.....	4
	Ham, John M.....	Millbrook.....	58
	Hapeman, David H.....	Red Hook.....	12
	Hayes, M. W.....	Staatsburg.....	45
	Howland, John H.....	Wassaic.....	26
	Hubbard, George C.....	Red Hook.....	27
	Hudson River State Hospital	Poughkeepsie.....	2
	Kerley, R. Dudley.....	Red Hook.....	3
	Lloyd, Davison.....	Wassaic, R. D. 26.....	21
	Maplecroft Farm (See Dut- cher, J. Gerow).		
	Matteawan State Hospital..	Beacon.....	34
	Mills, Stephen R.....	Millerton.....	3
	Montfort, J. P., & Son.....	Hopewell Junction.....	38
	Moore, Alfred H.....	Moore's Mills.....	10
	Morgenthau, Henry, jr.....	Hopewell Junction.....	15
	Newbold, Thomas.....	Hyde Park.....	12
	Perkins, C. H.....	Poughkeepsie.....	40
	Pulver, Anthony.....	Pine Plains.....	12
	Rapelje, John.....	Hopewell Junction.....	7
	Righter, J. Walter.....	Pine Plains.....	17
	Roylance, Frank D.....	La Grangeville.....	1
	Sheldon, Albro W.....	Wingdale.....	7
	Strever, Raymond V.....	Pine Plains.....	15
	Taber Bros.....	Pawling.....	29
	Traver, Chas. R.....	Rhinebeck.....	8
	Wanser, H. S.....	Pawling.....	18
	Whalen, Anthony.....	La Grangeville.....	9
	White, Chas. H.....	Wappingers Falls.....	12
	Wintringham, H. C.....	Millerton.....	8
Erie.....	Avery, O. J.....	North Collins.....	6
	Boardway, Joseph P.....	Lawtons.....	14
	Boardway, M. H.....	Lawtons.....	2
	Cabana, Oliver, jr.....	Elma Center.....	450

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Erie.....	Choate, Jerome F.....	Clarence.....	20
	Churchill, C. D., & Son....	Akron.....	6
	Clark, A. E.....	Angola.....	10
	Cornwall, Barbara K., & Son	South Wales.....	8
	Foss, Elmer.....	South Wales.....	20
	George, E. P.....	Chaffee.....	20
	Georgi, Oscar F.....	Eden Centre.....	3
	Goodemote, J. P.....	Springville.....	8
	Gowanda State Homeo- pathic Hospital.....	Collins.....	21
	Hayes, Elmer G.....	East Aurora.....	1
	Herman, C. A.....	North Collins.....	2
	Hughson, Dr. J. A.....	East Aurora.....	35
	Hurd, Clark W.....	Elma.....	25
	Luther, E. J.....	Lawtons.....	10
	Miller, F. W..... (Farm at Holland)	46 West Market St., Buffalo	14
	Owen Bros.....	Akron.....	1
	Pierce, Duncan H.....	Derby.....	1
	Powers Farm Co.....	Armor.....	10
	Pratt, J. G.....	Lawtons.....	9
	Sidway, Charlotte S.....	Grand Island.....	35
	Stephan, Henry F.....	Town Line.....	8
	Studley, Sumner W.....	Gowanda.....	12
	Taylor, Ford W.....	North Collins.....	7
	Taylor, Merton.....	North Collins.....	9
	Thomas Indian School.....	Iroquois.....	1
	Toergel, A. T., & Son.....	Williamsville.....	30
	Tomlinson, Ray.....	Wales Center.....	14
	Warner, S. W.....	Collins.....	40
	Yates, Harry.....	Orchard Park.....	115
Essex.....	Barker, E. B.....	Crown Point.....	15
	Bigelow, F. E.....	Whallonsburg.....	48
	Braisted, Geo A., & Son....	Westport.....	1
	Clark, D. Crawford.....	Essex.....	*47
	Cook, Albert F.....	Whallonsburg.....	14
	Gregory Bros.....	Olmstedville.....	15
	Johnson, O. H.....	Ticonderoga.....	12
	Lake Placid Co.....	Lake Placid Club.....	5
	Murdock, John S.....	Crown Point.....	8
	O'Brien, Jeremiah.....	Ticonderoga.....	35
	Phinney, Scott E.....	Wadhams.....	4
	Rice, J. H.....	Whallonsburg.....	3
	Sisson Bros.....	Crown Point Center.....	1
	West Bros.....	Reber.....	45
Franklin.....	Beyett, H. H.....	North Bangor.....	1
	Crooks, S. G.....	West Bangor.....	9

* Including pure-breds not registered.

CATTLE — HOLSTEIN FRIESIAN

391

County in which stock is located	Owner	Address	Number of animals
Franklin	Dengan, Loren W	Saranac Lake	15
	Eddy, Thomas S	Malone, R. D. 5	*6
	Fallon, J. F	Constable	8
	Ferguson, John J	Malone	19
	Fleury, Frank J	Constable	2
	Gale, Byron	Brinkton	9
	Harwood, Chas. W	North Bangor	10
	Holden, James	Fort Covington	5
	McElwain, J. W	Fort Covington	38
	McGibbon, Chas	Constable	7
	McGowan, A. J	North Bangor	22
	McKenna, Floyd	Fort Covington	3
	Orton, A. O	North Bangor	3
	Orton, Fred	North Bangor	1
	Plumb, C. R	Bangor	40
	Plumb, H. F	North Bangor	32
	Rider, Mrs. Mary L	Malone	4
	Russell, H. A	Bombay	15
	Scott, Millard F	North Bangor	1
	Sturin, C. P	Loon Lake	25
	Wilson, R. E., & Son	Constable	30
Fulton	Argotsinger, Burton	Gloversville, R. D. 2	5
	Arthur, B. H	Gloversville	3
	Cole, Wesley W	Mayfield	1
	Cross, Charles O., & Son	Johnstown	19
	Hayes, Forba D	St. Johnsville	6
	Kasson & Albro	Gloversville	1
	Kennedy, Martin	Johnstown	14
	Mosher, L. J	St. Johnsville	28
	Thomas, E. G	Gloversville	4
	Vaughan, J. W	St. Johnsville	50
Genesee	Winter, Franz R	Stratford	1
	Chapin, R. E., & Son	Batavia	225
	Cook, Edwin I	Bergen	6
	Cornelius, Adam E	Darien Center	17
	Ferguson, Geo. H	Elba	23
	Houseknecht, David L	Corfu	*8
	Judd, F. Howard	Linden	20
	Ross Brothers	Corfu	31
	Rumsey, M. C	Batavia	4
	Smith, Franc A	Alexander	42
	Waite, E. H	Alexander	14
	Wingate, W. H	Byron	7
	Woodruff, M. Merlyn	Alexander	1
	Young, Theodore	Darien	23
	Yunker, Geo	Alexander	6

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Greene.....	Bogardus, Herbert.....	Acra.....	1
	Calder, John J.....	Freehold.....	1
	Coonley, H. G.....	Greenville.....	3
	Horton, H. C.....	Catskill.....	10
	Krieger, Elmer.....	Prattsville.....	2
	Leach, James H.....	Tannersville.....	12
	Morse, A. J.....	Halcott Center.....	31
	Riley, Thomas J.....	Catskill.....	13
	Slee, A. J.....	Sunside.....	9
	Stevens, M. P., & Son.....	Greenville.....	4
Hamilton.....	Kenwell, Isaac.....	Indian Lake.....	5
Herkimer.....	Armstrong, M. Earle.....	West Winfield.....	*10
	Armstrong, Roy D.....	West Winfield, R. D. 3.....	*11
	Beardslee, G. R.....	East Creek.....	23
	Bell, Charles.....	Herkimer.....	25
	Bronner, Myron G.....	Little Falls.....	4
	Brown, A. W.....	West Winfield.....	100
	Burke, John.....	Ilion.....	42
	Burrell, E. J.....	Little Falls.....	88
	Burrell, Mrs. Louisa L.....	Little Falls.....	9
	Carpenter, Mrs. E. L.....	Poland.....	40
	Carpenter, Pelton L.....	Gravesville.....	7
	Charles, John T.....	West Winfield.....	12
	Conkling, James.....	Ilion.....	2
	Davies, George.....	West Winfield, R. D. 1.....	*9
	Davy, Wm. H.....	Little Falls.....	17
	Fear, Frederick T.....	Ilion.....	17
	Fitch, H. H.....	West Winfield, R. D. 3.....	9
	Ford, W. I.....	Little Falls.....	1
	Green, Fred J.....	Chepachet.....	6
	Hansel, F. L.....	East Winfield.....	1
	Harrison, Leonard E.....	West Winfield.....	14
	Hayes, Geo. E.....	Frankfort, R. D.....	1
	Hildreth, J. T.....	Herkimer.....	6
	Hines, A. L.....	Newport.....	10
	Hines, Ora.....	Poland.....	30
	Hoke, Chas. N.....	Jordanville.....	3
	Hull, H. H. & Son.....	Ilion.....	9
	Illig, F. C.....	Ilion, Box 75.....	37
	Law, Gordon.....	Middleville.....	12
	Leavitt, G. B.....	Dolgeville.....	*9
	McArthur, Daniel.....	Grant.....	12
	Miller, Max.....	Herkimer.....	47
	Morris, D. W., & Sons.....	West Winfield.....	37
	Murray, James B.....	West Winfield.....	5
	Ostrander, Wm. B.....	Jordanville.....	3
	Robens, W. D.....	Poland.....	150

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Herkimer.....	Rose, O. D.....	West Winfield.....	12
	Russell, Ernest B.....	Poland.....	3
	Russell, Solon W.....	Poland.....	26
	Shimel, W. E.....	Mohawk, R. D.....	3
	Silvernail, D. D.....	Dolgeville.....	2
	Springer, D. H.....	Jordanville.....	20
	Stebbins, H. D.....	West Winfield.....	27
	Stroup, David.....	Ilion.....	10
	Wheeler, H. H.....	West Winfield.....	40
	Whitney, F. C.....	Ilion.....	2
	Wiles, Byron.....	Van Hornesville.....	2
	Williams, A. J.....	West Winfield.....	7
	Wood, Don J.....	West Winfield.....	60
	Young, Owen D.....	Van Hornesville.....	68
Jefferson.....	Alverson, Ray.....	Henderson.....	5
	Ball, W. D.....	Carthage.....	3
	Barbour, Geo. W.....	Dexter.....	9
	Barnes, D. C.....	Pierrepont Manor.....	9
	Barnes, Lansing.....	Pt. Peninsula.....	8
	Bates, James, & Son.....	Cape Vincent, R. D.....	11
	Bent, Myron H.....	Antwerp.....	12
	Bergen, W. D.....	Limerick.....	16
	Bettinger, Garry S.....	Mannsville.....	3
	Bretsch, D. C.....	Carthage, R. D. 3.....	14
	Briggs, Mrs. Sarah A.....	Watertown.....	6
	Bunce, E. H.....	Watertown, R. D. 3.....	2
	Burhans, D. E.....	Philadelphia.....	1
	Burningham, C. J.....	Pierrepont Manor.....	8
	Burton, L. W.....	LaFargeville.....	10
	Carter, A. Bion.....	Carthage.....	25
	Chavoustie, Charles A.....	Three Mile Bay.....	20
	Cheeseman, C. B.....	Theresa.....	8
	Clark, Arthur.....	Adams.....	4
	Clemons, E. H.....	Carthage.....	5
	Colligan, E. J.....	Watertown.....	30
	Cooper, Madison.....	Calcium.....	23
	Dickhaut, F. M.....	Redwood.....	11
	Dickhaut, F. N.....	La Fargeville.....	7
	Dickhaut, George M.....	Theresa.....	24
	Dorr, Adam A., & Claude G.....	Depauville.....	1
	Doyle, H. C.....	Natural Bridge.....	2
	Duford, F. A.....	Chaumont.....	9
	Dye, Ernest B.....	Antwerp.....	6
	Eastman, C. A.....	Adams.....	13
	Eddy, Geo. C.....	Theresa.....	8
	Eiss, A. S., & Son.....	La Fargeville.....	*6
	Ellis, S.....	Belleville.....	35

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Jefferson.....	Evans, J. E.....	Redwood.....	8
	Farr, John D.....	Watertown.....	15
	Favry, Frank.....	Chaumont.....	19
	Fitzgerald, M. G.....	Cape Vincent.....	17
	Fults, H. W.....	Sterlingville.....	*24
	Getman, W. B.....	Chaumont.....	4
	Giles, Wm.....	Black River.....	1
	Gillette, E. S.....	Watertown.....	33
	Gillette, S. L.....	La Fargeville.....	2
	Goodrich, Earl.....	Watertown.....	11
	Gragg, Clyde A.....	Watertown, R. D. 2.....	8
	Graves, C. A.....	Carthage.....	9
	Graves, Frank L.....	Philadelphia.....	3
	Hall, Erwin.....	Evans Mills.....	18
	Haller, Chas. A.....	La Fargeville.....	10
	Haller, Norris B.....	La Fargeville.....	13
	Hibbard, Jerome E.....	Evans Mills.....	23
	Holmes, A. E.....	Philadelphia.....	8
	Hyde, Mrs. Charles H.....	Watertown.....	7
	Johnson, C. A.....	Belleville.....	35
	Johnson, E. B., & G. F.....	Chaumont.....	25
	Kilborn, J. R.....	Cape Vincent.....	30
	Langworthy, C. R.....	Adams Center.....	22
	La Rock, W. J.....	Evans Mills.....	7
	Leonhardt, Henry.....	Redwood.....	3
	Liscum, Leslie E.....	Adams.....	1
	McNeil, George T.....	Theresa.....	50
	Manor Farms.....	Pierrepoint Manor.....	85
	Mather, A. G., & Son.....	Adams.....	67
	Matteson, W. E.....	Pierrepoint Manor.....	70
	Middleton, D. C.....	Black River.....	97
	Miller, De Alton H.....	Adams.....	34
	Miller, E. J.....	Theresa.....	3
	Morgan, H. W. B.....	Adams, R. D. 2.....	8
	Nellis, Oline A.....	Evans Mills.....	1
	Noble, Herbert J.....	Mannsville.....	20
	Norton, D. W.....	De Pauville.....	24
	O'Neil, Thomas.....	Watertown, R. D. 2.....	9
	Owens, Joseph.....	Antwerp.....	25
	Patrick, H. S.....	Adams.....	1
	Peo, Jas. A.....	Cape Vincent.....	1
	Pohl, Chas. A.....	29 Broadway, New York...	22
	Pohl, E. L.....	Watertown.....	70
	Pressaw, George C.....	Philadelphia.....	19
	Rexford, O. M.....	Watertown.....	30
	Rice, F. B.....	Watertown.....	3
	Rickett, B. E.....	Three Mile Bay.....	9

* Including pure-breds not registered.

CATTLE — HOLSTEIN FRIESIAN

395

County in which stock is located	Owner	Address	Number of animals
Jefferson.....	Ridsdale, W. S.....	Antwerp.....	3
	Robbins, G. S.....	Adams.....	52
	Rogers, R. W. E.....	Cape Vincent.....	21
	Ronas, F. L.....	Philadelphia.....	40
	Rose, Roy W.....	Adams.....	1
	Rounds, Geo. W.....	Mannsville.....	11
	Rundell, Mrs. F. E.....	Carthage.....	3
	Ruttan, Geo. A.....	Dexter.....	2
	Seaman, James M.....	Sterlingville.....	3
	Shelmidine, J. D., & Sons...	Lorraine.....	4
	Simonet, M. L.....	Evans Mills.....	1
	Smith, George L.....	Watertown, R. D. 1.....	15
	Spink, M. J., & M. H.....	Rodman.....	16
	Squire, Walter.....	Adams Center.....	2
	Staplin, J. W.....	Mannsville, R. D. 1.....	4
	Strickland, S. M.....	Carthage.....	105
	Sullivan, John.....	Natural Bridge.....	11
	Swartout, Eugene, & Son...	Clayton.....	1
	Swartout, George.....	Clayton.....	3
	Sweet, Geo. N.....	Watertown.....	132
	Timmerman, Fred.....	Theresa.....	9
	Todd, A. C., & H. S.....	East Rodman.....	11
	Van Allen, E. P.....	Theresa.....	13
	Van Doren, Rolla.....	Three Mile Bay.....	13
	Wagner, Geo.....	Redwood.....	38
	Waite, H. H.....	Adams.....	20
	Ward, Chas. E.....	Evans Mills.....	11
	Whaling, John, & Sons.....	Carthage.....	20
	Whattam, Andrew D.....	Three Mile Bay.....	29
	Wood, Chas. E.....	Philadelphia.....	11
	Woodward, Frank H.....	Adams Center.....	5
	Wyckoff, M. T.....	Cape Vincent.....	2
	Zimmer, Louis.....	La Fargeville.....	34
Lewis... ..	Allen, Fred W.....	Constableville.....	*6
	Arthur, Eugene.....	Lowville.....	74
	Bailey, F. M. (See Merriam, C. C. & C. H.)		
	Berrus, Elton M.....	Lowville, R. D. 4.....	37
	Beyer, Philip A.....	Castorland.....	25
	Bickford, A. C.....	Lowville.....	96
	Boshart, Lewis H.....	Lowville.....	11
	Carpenter, Leon E.....	Glenfield.....	12
	Connor & Yale.....	Lowville, R. D. 5.....	8
	Cook, Alson, & Sons.....	Denmark.....	1
	Dewey, J. M.....	Turin.....	96
	Elmer, Frank J.....	Lowville.....	6
	Dewey, W. H.....	Turin.....	4

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Lewis.....	Gordon, Elon F.....	Lowville, R. D. 2.....	*8
	Graves, Bennett C.....	Castorland.....	11
	Graves, E. P.....	Lowville, R. D. 4.....	12
	Hall, Dr. C. B.....	Copenhagen.....	15
	Jackson, Harland H.....	Boonville, R. D. 1.....	20
	Higby, Herbert.....	Constableville.....	5
	Hirschy, Wm.....	Castorland.....	7
	Jones & Gebbie.....	Lowville.....	47
	Henry, D. C..... (Farm at Martinsburg)	Auburn.....	*6
	Kelly, W. E.....	Copenhagen.....	6
	Lansingdale Stock Farm, Inc.	Copenhagen.....	45
	Lewis, John R.....	Lowville.....	4
	Lyman, Myren M.....	Louisville.....	4
	Maher, Jed.....	Copenhagen.....	25
	Maher, T. W.....	Copenhagen.....	11
	Marcellus, Albert L.....	Glenfield.....	13
	Markham & Benson Bros...	Port Leyden.....	100
	Matty Brothers.....	Copenhagen.....	38
	Merriam, C. C. & C. H., & Bailey, F. M.....	Lyons Falls.....	*17
	Moser, Philip.....	Croghan.....	*4
	Murphy, Richard S.....	Lowville.....	8
	Olmstead, Leon.....	Lyons Falls.....	12
	Paris, W. W.....	Copenhagen.....	24
	Peck, F. G.....	Copenhagen.....	2
	Rice, L. C., & Son.....	Lowville.....	35
	Riebennacht, Wesley.....	Turin.....	7
	Roberts, G. S.....	Copenhagen.....	4
	Rofinot Bros.....	Lowville.....	20
	Rohr, H. Duett.....	Deer River.....	11
	Ross, H. D., & Sons.....	Lowville.....	16
	Salmon Brothers.....	Glenfield.....	42
	Salmon, N. W.....	Glenfield.....	70
	Searle, E. J.....	Lowville.....	50
	Sheldon, Earl.....	Copenhagen.....	*48
	Stanton, Earl.....	Lowville.....	12
	Strife, N. N.....	Lowville.....	22
	Strong, L. T.....	Turin.....	11
	Thayer, O. C.....	Constableville.....	3
	Vaughn, Frank J.....	Lowville.....	9
	Weller, Mrs. H. D., & Son..	Lowville.....	33
	Wicks, Adrian.....	Harrisville.....	7
	Wolfe, Fred C.....	West Leyden.....	6
	Zehr, A. B., & Son.....	Lowville.....	10
	Zehr, Joseph M.....	Croghan.....	5
	Zimmer, C. H.....	Constableville.....	19

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Livingston.....	Chapin, W. W.....	Conesus.....	6
	Davis, Fitch M.....	Livonia.....	14
	Donnan, A. G.....	Linwood.....	19
	Donnan, George S.....	Linwood.....	8
	Ellis, J. H.....	Caledonia.....	20
	Everman, Albert.....	Dansville.....	13
	Everman, Clement.....	Dansville.....	*13
	Gray, G. F., & Son.....	Lima.....	3
	Holden, T. E.....	Dalton.....	3
	MacColl, Alex. J.....	Caledonia.....	1
	Markham & Puffer.....	Avon.....	40
	Ashley & Price.....	Livonia.....	24
	Shay, Lloyd A.....	Dansville.....	11
	Slaight, A. J., & Son.....	Tuscarora.....	4
	Thompson, L. L.....	Dalton.....	2
	Williams, W. J.....	Caledonia.....	3
Madison.....	Ace, B. W.....	Earlville.....	5
	Albe, Mrs. Celia S.....	Hamilton.....	19
	Allard, H. J.....	Cazenovia.....	11
	Allen, I. S.....	Hubbardsville.....	40
	Arity, G. W.....	Bouckville.....	11
	Babcock, Seward H.....	Solsville.....	15
	Babock, Thomas B.....	East Hamilton.....	15
	Barstow, Byron.....	Earlville.....	4
	Beebe, E. L., Estate.....	Nelson.....	10
	Benedict, Zar.....	Lebanon.....	8
	Bennett, J. F.....	Cazenovia, R. D. 3.....	1
	Berry & Parker.....	Earlville.....	4
	Berry, Geo. W.....	Poolville.....	40
	Betsinger, Fred H.....	Oneida.....	2
	Billings, Edwin D.....	Earlville.....	21
	Blair, J. C.....	Morrisville.....	3
	Blakeman, A. F.....	De Ruyter.....	21
	Blanchard, W. D.....	New Woodstock.....	6
	Bond, W. E.....	Potsdam.....	40
	(Farm at Canastota.)		
	Brainard, O. D. & L. E....	Hubbardsville.....	19
	Brand, A. N.....	Hamilton.....	15
	Briggs, Walter.....	Earlville.....	17
	Broad, John H.....	Morrisville.....	20
	Brown, Arthur.....	Oneida.....	4
	Brown, A. A.....	Georgetown Station.....	43
	Brown, Arthur D.....	Leonardsville.....	12
	Brown, Chas. D., & Evans, Fred.....	Georgetown Station.....	2
	Brown, C. P.....	Canastota.....	16
	Brown, Palmer H.....	Erieville.....	12

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Madison.....	Brownell, F. H.....	Hubbardsville.....	35
	Burchard, S. B.....	Hamilton.....	74
	Burleson, W. J.....	Munnsville.....	4
	Burlingame, G. G.....	Cazenovia.....	100
	Burton, Fred B.....	Morrisville.....	21
	Byrd, Charles.....	Lebanon.....	1
	Cameron, Charles.....	Madison.....	18
	Campbell, Frank A.....	Cazenovia, R. D. 1.....	22
	Campbell, S. J.....	Munnsville.....	9
	Chard, W. G..... (Meadowood Farms)	Cazenovia.....	45
	Chase, C. H.....	Wampsville.....	40
	Chasmer, Jerome L.....	De Ruyter.....	12
	Christ, Wilhelm.....	Stockbridge.....	4
	Clark, C. A.....	New Woodstock.....	*21
	Clark, Robert L.....	Munnsville.....	5
	Cole, A. F.....	Morrisville.....	24
	Coleman, Carlos J.....	Hamilton.....	2
	Coley, H. W.....	Oneida.....	9
	Collin & Taylor.....	Chittenango Station.....	45
	Conan, Albertus.....	Kirkville.....	7
	Cook, A. L.....	Erieville.....	5
	Coulter, Scott.....	Cazenovia.....	10
	Crandall, B. D.....	De Ruyter.....	32
	Crandall, Jas. A.....	Brookfield.....	6
	Crawford, E. A.....	Canastota.....	2
	Cummings, Fred.....	Munnsville.....	3
	Austin, Archie.....	De Ruyter.....	10
	Curtis, Jay.....	Morrisville.....	7
	Danehy, W. H.....	Canastota.....	24
	Dart, E. R., & Son.....	Hubbardsville.....	20
	Davis, Fred D.....	Madison.....	7
	Davis, Wm. H.....	Oneida.....	5
	Day, Elvert G.....	Stockbridge.....	1
	De Lano, Milton.....	Canastota.....	3
	Diable, Robert.....	Munnsville.....	4
	Dixe, Nicholas.....	Cazenovia.....	6
	Dorman, J. F.....	New Woodstock.....	1
	Doyle, Ivan J.....	New Woodstock.....	9
	Dresser, H. S.....	Poolville.....	3
	Dunham, C. D.....	Hamilton.....	4
	Dunham, C. L.....	Lebanon.....	3
	Eames, J. A., & Son.....	Canastota.....	12
	Edgerton, Irving D.....	East Hamilton.....	17
	Elmore, Madison.....	Sheds.....	20
	Enck, George, & Sons.....	Munnsville.....	9
	English, Clarence D.....	Cazenovia.....	3

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Madison.....	Ensign, Wendell.....	Erieville.....	47
	Evans, Charles A.....	Hamilton.....	20
	Evans, Fred. (See Brown, C. D.)		
	Excell, Solomon.....	East Hamilton.....	3
	Fay & Cloyes.....	Earlville.....	2
	Field, H. T.....	Oneida.....	5
	Finnegan, Thomas.....	Madison.....	25
	Fisher, C. E.....	Cazenovia.....	14
	Ford, Charles S.....	Perryville.....	3
	Freeborn, F. L.....	New Woodstock.....	48
	Freeborn, J. C. & L. W....	New Woodstock.....	48
	Frost, J. R.....	Munnsville.....	135
	Gates, John W.....	Chittenango.....	75
	Gee, C. A.....	New Woodstock.....	6
	Geer, C. H.....	Lebanon.....	5
	Geer, Fred L.....	Lebanon.....	4
	Goslee, H. H., & Son.....	Oneida.....	17
	Green, Thomas.....	Hamilton.....	*5
	Green, Thomas, & Son.....	Hamilton.....	*7
	Greene, C. A., & Son.....	Perryville.....	9
	Grems, Edward G.....	Canastota.....	10
	Groat & Robotham.....	Canastota.....	24
	Grosvenor & Finen.....	Lebanon.....	28
	Guthrie, F. F.....	Earlville.....	9
	Hall, S. S.....	Earlville.....	16
	Handy, H. H. S.....	Cazenovia.....	70
	Harris, Adelbert.....	Poolville.....	20
	Hartshorn Holstein Co., A.		
	A.....	Hamilton.....	65
	Hartshorn, H. W.....	Hamilton.....	20
	Hartshorn, R. P.....	Lebanon.....	35
	Hartt, D. L.....	Cazenovia.....	80
	Hauck, Jos. F.....	Peterboro.....	11
	Helyar, F. G.....	Morrisville.....	5
	Hewitt, Dr. J. H.....	Morrisville.....	4
	Hibbard, S. J.....	Hubbardsville.....	11
	Hickox, Remington B.....	Munnsville.....	4
	Higgins, H. O.....	North Brookfield.....	2
	Holl, James.....	De Ruyter.....	4
	Hollenbeck, Harry F.....	Munnsville.....	7
	Howard, Floyd A.....	Morrisville.....	11
	Howell, Albert.....	Morrisville.....	5
	Hoxie, Arthur S.....	Leonardsville.....	2
	Hubbs, Harold F.....	Kirkville.....	30
	Hughes, W. H.....	Webster Station.....	43
	Hungerford, Levi.....	Canastota.....	24

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Madison.....	Hunt & Wells.....	Hubbardsville.....	28
	Hunt, C. A.....	De Ruyter.....	8
	Hunt, F. L., & I. H.....	New Woodstock.....	44
	Jennings, J. M.....	Earlville.....	30
	Johnson, Elmer C.....	Solsville.....	23
	Johnston, G. W.....	Oneida, R. D. 1.....	14
	Jones & Wilson.....	Canastota.....	25
	Jones, H. H.....	Cazenovia.....	22
	Jones, John R.....	Morrisville.....	12
	Jones, Keith W.....	Cazenovia, R. D. 3.....	27
	Jones, L. E.....	New Woodstock.....	40
	Jones, Warren M.....	Oneida, R. D. 3.....	8
	Judd, Earl D.....	Wilson.....	2
	Judd, L. A.....	New Woodstock.....	10
	Keith, Ralph S.....	North Brookfield.....	6
	King, Henry T.....	Chittenango.....	50
	Knapp, Edgar W.....	Georgetown.....	10
	Knapp, L. W., & Son.....	Earlville.....	2
	Lamb & Langworthy.....	East Hamilton.....	70
	Lamb, A. E.....	Hamilton.....	20
	Lamunion, A. L.....	New Woodstock.....	30
	Langworthy, Irvin.....	Hamilton.....	8
	La Selle, John B.....	Georgetown.....	5
	Lee, Irving H.....	New Woodstock.....	23
	Lee, Jay W.....	New Woodstock.....	12
	Lewis, Ray.....	Cazenovia.....	5
	Livermore, James M.....	Bouckville.....	23
	Loomis, Fred H.....	Hamilton.....	16
	Loomis, Walter O.....	Hubbardsville.....	16
	Lynch, James, & Son.....	Pratts Hollow.....	22
	Mantell, G. W.....	Canastota.....	4
	March, C. H.....	Munnsville.....	26
	March, Henry.....	Morrisville.....	2
	Marshall, C. B.....	Morrisville.....	75
	Martin, J. F.....	Bouckville.....	30
	Mattersen, H. H.....	Hamilton.....	8
	Maxwell, A. G.....	Canastota, R. D. 4.....	3
	Meadowood Farms. (See Chard, W. G.)		
	Messinger, O. E.....	Canastota, R. D. 2.....	30
	Middlemast, W. J.....	Cazenovia.....	15
	Miller, F. A.....	Earlville.....	10
	Miller, Gerrit S.....	Peterboro.....	34
	Miner & Whitford.....	Hamilton.....	20
	Miner, Paris C.....	Earlville.....	9
	Moffett, G. H.....	New Woodstock.....	*4

* Including pure-breds not registered.

CATTLE — HOLSTEIN FRIESIAN

401

County in which stock is located	Owner	Address	Number of animals
Madison.....	Moon, Claude E.....	Canastota, R. D. 6.....	14
	Moon, Harry A.....	Canastota.....	4
	Mott, F. P., sr.....	Munnsville.....	4
	Morris, J. C.....	Hamilton.....	30
	Morse, J. Grant.....	Hamilton.....	35
	Mor-Van Farms.....	Eaton.....	7
	Mullany, T. S.....	Earlville.....	1
	New, T. G.....	Canastota.....	6
	Newcomb, A. L.....	Munnsville.....	5
	Nickerson & Hayes.....	Earlville.....	8
	Niles & Powell.....	Lebanon.....	6
	Olcott, Walton B.....	Canastota.....	5
	Oneida Community, Ltd....	Kenwood.....	182
	Palmer, W. J.....	West Edmeston.....	1
	Parker Bros.....	Bouckville.....	34
	Parkhurst, A. B.....	Wampsville.....	3
	Parsons, John R.....	Earlville.....	4
	Patterson, J. G.....	Hamilton.....	13
	Peck, J. Glenn.....	Kirkville, R. D. 1.....	9
	Perkins, Judson O.....	Cazenovia.....	19
	Phelps, J. H.....	Morrisville.....	2
	Phelps, John L.....	Solsville.....	43
	Phillips, H. W.....	De Ruyter.....	5
	Price, P. H.....	Georgetown.....	15
	Putnam, Wm. H.....	Nelson.....	4
	Quackenbush, J. E.....	Stockbridge.....	36
	Rasmussen, Peter.....	Georgetown Station.....	5
	Reidy, J. T.....	Morrisville.....	4
	Reitz, S. P., & Son.....	Morrisville.....	3
	Richardson, H. S.....	Munnsville.....	15
	Rivenburgh, F. H.....	Stockbridge.....	50
	Roberts, E. D.....	Cazenovia.....	11
	Russell, Lewis, Estate.....	Hamilton.....	24
	Sabin, Austin M.....	Lebanon.....	23
	Scott, Frank.....	Hubbardsville.....	9
	Scott, Fred L.....	Stockbridge.....	1
	Scott, G. F.....	Bridgewater.....	27
	Sexton, H. N.....	Earlville.....	14
	Seymour, F. D.....	Earlville.....	51
	Shay, David.....	Canastota.....	3
	Shoemaker, Floyd R.....	Canastota.....	21
	Shoemaker, Robert A.....	Canastota.....	8
	Slocum, Charles L.....	New Woodstock.....	3
	Smith Bros.....	De Ruyter.....	90
	Smith, A. M.....	Morrisville.....	5
	Smith, Horace K.....	Cazenovia.....	2
	Smith, W. J., & Son.....	Sheds.....	4
	Sowter, Andrew.....	Chittenango.....	15

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Madison.....	Spooner, E. J., & Son.....	Stockbridge.....	10
	Staad, Peter.....	Canastota.....	5
	Stanbre, Chas.....	Earlville.....	5
	State Department of Agri- culture.....	Albany.....	1
	State School of Agriculture..	Morrisville.....	31
	Stebbins, F. D.....	Earlville.....	10
	Stebbins, Fred L.....	Earlville.....	14
	Stillman, Fred F.....	Brookfield.....	5
	Stoddard, D. V.....	New Woodstock.....	22
	Stoddard, J. F.....	Georgetown.....	1
	Stowell, C. H.....	Lebanon.....	8
	Taylor, E. H.....	Earlville.....	2
	Taylor, John J.....	Hamilton.....	20
	Tayntor, I. J.....	West Eaton.....	6
	Thompson, J. J.....	New Woodstock.....	38
	Thurber, L. F.....	New Woodstock.....	15
	Thurston, A. J.....	Munnsville.....	4
	Tinner & Snitchler.....	Hamilton.....	39
	Tuttle, F. S.....	Hamilton.....	13
	Tuttle, William H.....	Clockville.....	11
	Ufford, Farnam.....	Canastota.....	23
	Ufford, Curtis J.....	Canastota.....	2
	Upham, Lloyd D.....	Georgetown.....	33
	Utter, D. B., & Son.....	Georgetown Station.....	50
	Warren, David.....	De Ruyter.....	9
	Warren, D. A.....	Georgetown.....	*12
	Washburn, Harry W.....	Bouckville.....	13
	Weaver, Una E.....	Cazenovia.....	10
	Wenham, James.....	Madison.....	12
	Wentworth Bros.....	Georgetown.....	8
	West, Frank P.....	Brookfield.....	30
	Wheeler & Mayne.....	West Edmeston.....	34
	Wheeler, H. L.....	West Edmeston.....	9
	Wickwire, H. H.....	Hubbardsville.....	60
	Wightman, Benj. J.....	West Eaton.....	25
	Wilcox & Hartshorn.....	Lebanon.....	16
	Wilcox, R. J.....	De Ruyter.....	5
	Wood, Arthur, & Son.....	Lebanon.....	20
	Wood, Mrs. G. Herbert....	De Ruyter.....	*16
	Wood, H. C.....	Morrisville.....	58
	(Woodmont Farms)		
	Woodmont Farms (See Wood, H. C.)		
	Woodman, Hannah.....	Hamilton.....	2
	Woodman, S. S.....	Earlville.....	35
	Woods, G. Edwin.....	Munnsville.....	2

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Madison.....	Woods, John C.....	Munnsville.....	13
	Worden, E. D.....	Canastota.....	4
	York, A. L.....	Poolville, R. D. 1.....	13
	York, J. F.....	Poolville.....	7
Monroe.....	Adams, E. J.....	Spencerport.....	4
	Bennett, C. W. & William..	Hilton.....	*5
	Bird, Samuel.....	East Rochester.....	1
	Brown, Eugene D.....	Scottsville.....	2
	Clover Heights Farm. (See Jones, Lewis B.)		
	Cloverdale Farms.....	Charlotte.....	60
	Cromwell, F. B.....	Barnard.....	10
	Dale Bros.....	Penfield.....	8
	Du Bois, Edward, & Gillis..	Spencerport.....	1
	Fairbank, Augustus.....	Churchville.....	*14
	Green, William.....	Spencerport.....	3
	Harris, C. L. & G. H.....	Penfield.....	75
	Hinchey, W. S.....	Rochester, Box 729.....	60
	Jones, Lewis B.....	Pittsford.....	10
	(Clover Heights Farm, Rochester)		
	Le Frois, Joseph.....	Union Hill.....	29
	Lunt, C. S.....	Rochester.....	60
	Meade, Geo. L.....	Rochester.....	4
	Olmsted, Albert H.....	Rochester.....	62
	Pease, W. H.....	Mumford.....	11
	Remington, Harvey F.....	Rochester.....	135
	Smith, Fred G.....	Churchville, R. D. 2.....	16
	Thornell, W. B.....	Pittsford.....	2
	Waner, J. Burton.....	919 Culver Rd., Rochester..	19
	Williams, B. K.....	West Webster.....	*8
	Wingate, F. G.....	Churchville.....	3
	Wooster, Carl G.....	Union Hill.....	15
	Wooster, Fred M.....	Webster.....	15
Montgomery.....	Bander, Frank W.....	Fort Plain.....	38
	Bellinger, Frank.....	Fort Plain.....	4
	Berning, H. L.....	Fort Johnson.....	11
	Branthover, John.....	Minaville.....	19
	Christman, E. O.....	St. Johnsville.....	18
	Dievendorf, A. H.....	Sprakers.....	10
	Dygert Bros.....	Fort Plain.....	8
	Edwards, Frank.....	Fultonville.....	1
	Everson, Geo. W. & Mrs. Geo. W.....		Fort Plain.....
	Fahey, Philip, jr.....		Amsterdam.....
	Fredericks, F. W.....		Canajoharie.....
	Gray, Clarence A.....		Fort Plain.....
	Gros, Charles L.....		Fonda, R. D. 2.....

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Montgomery.....	Hickok, Wait.....	Amsterdam, R. D. 4.....	8
	Hoese, Conrad.....	Sprakers.....	9
	Ingersoll Bros.....	Fultonville.....	40
	Lasher, Nanning V.....	Fultonville.....	36
	Mallette, Martin J.....	Canajoharie, R. D. 2.....	7
	McClumpha, Geo. H., Est..	Amsterdam.....	23
	Miller, Alton.....	Fort Plain.....	30
	Miller, Jacob F.....	Amsterdam.....	34
	Montayne, Jay.....	Sprakers, R. D. 2.....	4
	Pepper, Lewis F.....	Amsterdam.....	1
	Pitcher, Burton L.....	Sprakers.....	5
	Pollock, Arthur J.....	Sprakers.....	8
	Rothemyer, Edw. Wm.....	Amsterdam, R. D. 3.....	7
	Ruff, Wm. F.....	Amsterdam.....	2
	Rutishauser, Jacob.....	Canajoharie.....	32
	Saltzman, Romane, & Sons.	Fort Plain.....	53
	Schuyler, A. J.....	Pattersonville.....	4
	Schuyler, Chas. I.....	Amsterdam, R. D. 2.....	7
	Schuyler, Wm. G.....	Amsterdam.....	3
	Schwenker, Leslie.....	Amsterdam, R. D. 3.....	7
	Shineman, J. & G.....	Canajoharie.....	9
	Shuttleworth, Walter.....	Amsterdam.....	6
	Stewart, J. T.....	Fonda.....	22
	Stockwell, George E.....	Fort Plain.....	12
	Timmerman, M. & W. E...	Fort Plain.....	8
	Walrath Brothers.....	Fort Plain.....	5
	White, De Forest A.....	Canajoharie.....	3
	Williams Brothers.....	Canajoharie.....	14
Nassau.....	Hoffman, Fred I.....	Farmingdale.....	2
	Robbins, R. H.....	East Williston.....	2
	Underhill, Henry W.....	Jericho.....	18
New York.....	Borden's Condensed Milk Co.....	108 Hudson St., New York.	3
	Moore, John F.....	136 West 92 St., N. Y.....	13
	Shea, John S.....	157 East 31 St., N. Y.....	26
	Velasco & Co.....	New York.....	38
Niagara.....	Ackerman, A. H.....	Wilson.....	4
	Binkley, W. G.....	Sanborn.....	*6
	Burdick, J. M.....	Lockport.....	6
	Gifford, Curtis S.....	Wilson.....	2
	Nicholl, C. L. & H. M., executors.....	Lockport.....	*10
	Shaw, H. F.....	Burt.....	1
	Stagner, Wm.....	Lockport.....	9
	Stevens Bros.....	Wilson.....	6
	Stevens, Mrs. E. E.....	Wilson.....	13
	Williams, August H.....	La Salle.....	3

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Oneida	Agne, Walter K.	Verona	8
	Alberding, O. J.	Cassville	1
	Allen, Horace	Clayville	2
	Anderegg, Albert	West Branch	5
	Barnes, H. E.	Utica	2
	Barns, A. C.	Westmoreland	3
	Barton & Cleary	Waterville	10
	Beebe, T. S.	Holland Patent	14
	Bott, Fred	Clinton	10
	Brainard, Clark M.	Waterville, R. D. 2	8
	Brooks, E. W.	Deansboro	4
	Brown, Wm. H.	Bridgewater	32
	Browne, Webb A., & Son.	Remsen	5
	Chaffee, Verne L.	629 West Thomas St., Rome	1
	Chamberlin, B. L.	Verona Station	1
	Clelland, F. J.	Camden	11
	Collis, R. C.	Utica	46
	Comstock, W. G.	Clinton	14
	Cook, Grove C.	Verona	2
	Corr, Lawrence T.	Rome	6
	Coventry, Sinclair	New Hartford	10
	Cummings, J.	Remsen, R. D. 2	*6
	Dam, H. R., & Son.	Vernon	8
	Davies, D. S.	Oriskany Falls	33
	Davies, Howard & Ralph	Paris Station	5
	Davis, Frank B.	Deerfield, Box 14	17
	Davis, H. L.	Remsen	28
	Day, Walter J.	Deansboro	8
	Dillon, William	Florence	8
	Dinsmore, G. S.	Westdale	2
	Dinsmore, W. H.	Westdale	1
	Dixon, Frank E.	Vernon	1
	Dorn, Howard A.	Vernon Center	5
	Dorr, Eugene	Oriskany Falls	17
	Dunn, J. H. & T.	Verona Station	5
	Dunton, Harvey V.	Camden	18
	Dye, Shirley C.	Bridgewater	20
	Eades, H. J.	Verona	*4
	Eastman, Howard S.	Waterville	15
	Eckel, Jacob R.	West Vienna	4
	Eddy, C. O.	Stokes	4
	Edic, P. A., & Son.	Augusta	13
	Ernenwein, Geo. P.	Verona Station	4
	Ernest, W. G.	Oneida, R. D. 3	10
	Esch, Fred W.	Verona	15
	Esch, J. M.	Verona, R. D. 1	4
	Evans, Chas. H.	Rome, R. D. 4	35

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Oneida.....	Evans, James T.....	Boonville.....	41
	Evans, R. Price.....	Cassville.....	30
	Fairchild, Chas. D.....	Oriskany Falls.....	7
	Fenton, Geo.....	Utica.....	1
	Finegan, James C.....	Taberg.....	12
	Francis, Griffiths, Es ate....	Remsen.....	29
	Fuller, Bradley.....	115 Genesee St., Utica.....	50
	Fuller, J. Brayton.....	Marcy.....	20
	Gallup, H. A. & E. J.....	Sauquoit.....	3
	Gaus, Frederick E.....	Utica.....	21
	Gerwig, E. W.....	Verona.....	9
	Goodson, Harry G.....	Deansboro.....	18
	Goodson, W. T.....	Deansboro.....	20
	Graves, Geo .L.....	Remsen.....	6
	Haley, James.....	Waterville.....	8
	Harrison, Mrs. H. A.....	Utica.....	38
	Hatch, Chas. T.....	Waterville.....	40
	Hayward, A. C.....	Knoxboro.....	6
	Hayward, D. S.....	Oriskany Falls.....	7
	Haselden, W. E.....	Clinton.....	1
	Hecox, Vander B.....	Sauquoit.....	16
	Herder, George B.....	Blossvale.....	20
	Hewitt, Allen C.....	Oriskany Falls.....	3
	Higgins, Howard H.....	Glenmore.....	6
	Hines, Frederick J.....	Boonville, R. D. 1.....	2
	Hoag, D. W.....	Vernon.....	10
	Hoag, F. W.....	Rome.....	25
	Holihan, William.....	Florence.....	6
	Hovey, George I.....	Deansboro.....	32
	Howard, Hudson.....	Bridgewater.....	6
	Howe, A. C.....	New Hartford.....	15
	Humphreys, Wm.....	New Hartford.....	*8
	Humstone, Arthur E.....	Vernon.....	16
	Hurlburt, Frank W.....	Boonville.....	1
	Hurley, Cornelius.....	Remsen.....	32
	Jackson, W. Herbert.....	Boonville.....	10
	Jewett, Earl B.....	Oriskany Falls.....	35
	Jones, Benj. F.....	Marcy.....	3
	Jones, Elias W.....	Holland Patent.....	6
	Jones, E. O.....	West Branch.....	10
	Jones, Evan J.....	Holland Patent.....	15
	Jones, Francis M.....	Clinton.....	125
	Jones, J. W. & Henry.....	Cassville, R. D. 1.....	4
	Karlen, J. D.....	Boonville.....	16
	Kaupman, Raymond E.....	Westmoreland.....	3
	Kennard, Geo. W.....	Deansboro.....	14

* Including pure-breeds not registered.

CATTLE — HOLSTEIN FRIESIAN

407

County in which stock is located	Owner	Address	Number of animals
Oneida	Kennard, Keston	Deansboro	1
	Kennedy Bros	Clayville	3
	Keys, E. Glenn	Deansboro	11
	King, D. L.	Waterville	4
	Kingsbury, E. E.	Boonville	*15
	Kinne, Linn (Farm at Cassville)	Utica	45
	Kline, G. J.	Stittville	5
	Lawrence, F. A.	Vernon	20
	Lawson, Wm. W.	Oriskany Falls	10
	Lewis, John J.	Barneveld	5
	Lewis, P. Newell	Waterville	10
	McArthur, J. A.	Remsen	26
	McLean, W. G.	Waterville	27
	Mallory, H. A.	New Hartford	2
	Maury, Mrs. Louise	Whitesboro	31
	Matteson, W. A.	Utica	70
	Maurice, Robert L.	Barneveld	30
	Miller, W. P.	Holland Patent	1
	Moore, Fred T.	Camden	13
	Morris, John S.	Vernon	5
	Murphy, Thos. G.	Taberg	6
	Norton, A. E.	Augusta	3
	Norton, Ernest	Camden	18
	O'Connor, F. H.	Knoxboro	1
	Ohm Brothers	Ava	1
	Orendorff, W. H.	Rome, R. D. 2	7
	Owens, G. H.	Ava	4
	Owens, John L.	Prospect	2
	Parsons, William	Rome, R. D. 7	8
	Patrick, F. L.	Verona Station	1
	Peenstra, Geo. R.	Vernon Center	12
	Perry, H. J.	Holland Patent	12
	Peters, N. D.	Utica	*20
	Phelps, Geo. H.	Vernon	4
	Phelps, J. H.	Vernon	15
	Phelps, J. H., & Son	Vernon	22
	Phillips, A. S.	Oriskany Falls	9
	Pierce, Frank E.	Holland Patent	16
	Pierce, J. D.	Cassville	2
	Pillmore, C. C.	Rome, R. D. 7	4
	Pohl, Valentine F.	Ava	45
	Pugh, Richard E.	Holland Patent	5
	Rathbun, F. G.	Verona	25
	Rebe, Theo. A.	West Branch	10

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Oneida.....	Rice, Lewis R.....	Vernon Center.....	9
	Rinkle, M. Leigh.....	Boonville.....	6
	Rinkle, Oliver.....	Boonville.....	5
	Ripley, E. Eugene.....	Waterville.....	4
	Roberts, David J.....	Sauquoit.....	6
	Roberts, G. M.....	Barneveld.....	16
	Roberts, S. G.....	Sauquoit.....	5
	Salm, John A.....	Vernon Center.....	2
	Samson, Henry W.....	West Branch.....	11
	Schneible, Charles H.....	Rome, R. D. 1.....	4
	Schneible, V., & Sons.....	Rome, R. D. 5.....	23
	Schwarz, F. L.....	Vernon.....	12
	Scothon, Chas. A. G.....	Lee Center.....	11
	Seybold, Theodore F.....	Durhamville.....	7
	Sherman, S. F.....	Utica.....	95
	Simmons, Geo. I., & Sons..	Camden.....	10
	Slate, Ernest L.....	Oriskany Falls.....	6
	Slocum, Millard M.....	Barneveld.....	74
	Smith, Virgil J.....	Rome.....	22
	Southworth, F. J.....	Bridgewater.....	18
	Spink, Floyd G.....	Utica.....	3
	Stellwagon, Chas. L.....	Verona.....	4
	Stoddard, W. I.....	Camden.....	15
	Stuart, Irwin E.....	Camden.....	6
	Sturdevant, J. Theo.....	Oriskany Falls.....	19
	Sweet, Horace B.....	Utica.....	9
	Taft, J. N.....	Taberg.....	3
	Teelin, Willard W.....	Blossvale.....	4
	Tharralt, Brinckerhoff C....	Boonville.....	67
	Thomas, Dan R.....	Stittville.....	43
	Thomas, Wyllys H.....	Westernville.....	7
	Thomson, F. H., & Son....	Holland Patent.....	100
	Tyler, Frank M.....	Rome, R. D. 7.....	2
	Tyler, N. N.....	Clinton.....	1
	Utica State Hospital.....	Utica.....	1
	Vandawalker, Howard.....	Camden.....	7
	Van Dresar, Ezra.....	Holland Patent.....	7
	Wadsworth, W. Lynn.....	Westmoreland.....	3
	Walker, John K.....	Holland Patent.....	18
	Wallace, I. G.....	West Branch.....	5
	Walsh, John, & Walsh Bros.	Clayville.....	65
	Walsworth, A. E.....	Rome.....	3
	Ward, Gaylord D.....	Clinton.....	1
	Warren, C. H.....	Verona.....	20
	Wentworth, Henry C.....	Verona.....	11
	Wetherell, G. E.....	Oriskany.....	40

County in which stock is located	Owner	Address	Number of animals
Oneida.....	Wetmore, F. J.....	Holland Patent.....	2
	Wheeler, Floyd C.....	Cassville.....	2
	Williams Bros.....	Clinton.....	1
	Williams, Luther.....	Rome, R. D. 4.....	2
	Wolfe, H. J.....	Bartlett.....	9
	Wolfe, Sanford T.....	West Branch.....	10
	Wood, B. W..... (Farm at Deerfield)	Schuyler.....	13
	Woods, Henry S.....	Camden.....	*7
Onondaga.....	Yager, B. E.....	Durhamville.....	26
	Abbott, Elmer E.....	Baldwinsville.....	22
	Alvord, James W.....	Kirkville.....	4
	Andrews, Charles D.....	Camillus.....	21
	Beach, Geo. B.....	Skaneateles, R. D.....	1
	Bellows, Claude W.....	Baldwinsville.....	2
	Bellinger, R. L., & Son.....	Kirkville.....	20
	Brockway, A. L.....	Syracuse.....	35
	Brown, Charles H.....	Jordan.....	1
	Brown, Oscar J.....	Baldwinsville.....	30
	Burden, W. G.....	Skaneateles.....	7
	Burt, A. T., & Sons.....	Jamesville.....	4
	Carley, D. E.....	Manlius, R. D. 3.....	22
	Chase, A. C..... (Farm in New Hampshire)	Syracuse.....	24
	Chase, A. S.....	Baldwinsville.....	25
	Cheney, W. W.....	Manlius.....	2
	Clark, Ernest A.....	Baldwinsville.....	5
	Clark, Fred.....	Baldwinsville.....	6
	Clay, Walter W.....	Tully.....	7
	Cook, George W.....	Jamesville.....	30
	Costello, Henry D., & Ever- ingham, Arthur.....	Syracuse.....	16
	Crandall, S. W., & Scam- mell, W. A.....	La Fayette.....	18
	Dawley, F. E.....	Fayetteville.....	41
	De Lima, Ella B.....	126 North Warren St., Syra- cuse.....	30
	Dwyer, D. Milton.....	Manlius.....	4
	Everingham, A. B.....	Syracuse.....	15
	Everingham, Arthur. (See Costello, Henry D.)		
	Fairbank, A. R.....	De Witt.....	20
	Ferguson, Alfred C.....	North Syracuse.....	90
	Filsinger, G. Fred.....	Jamesville.....	6
	Fisk, C. H.....	East Syracuse.....	27
	Fowler, Frank.....	Plainville.....	15
	French, Horace G.....	La Fayette.....	1

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Onondaga.....	Fuggle, S. R.....	Delphi Falls.....	30
	Gates, F. J.....	Jamesville.....	4
	Giddings, F. N.....	Baldwinsville.....	10
	Gilmore, Allen.....	Clay.....	7
	Godfrey, C. J.....	Phoenix, R. D. 2.....	17
	Graff, John (See Pierce, D. A.)		
	Graves, C. F.....	Clay.....	3
	Greene, G. Maurice.....	Tully.....	19
	Gridley, Oliver G.....	Kirkville.....	10
	Haggett, Sidney.....	Jordan.....	4
	Hamlin, R. G.....	Liverpool.....	15
	Haner, John A.....	Liverpool.....	6
	Harris, Jerome E.....	Skaneateles.....	1
	Harter, P. P.....	Otisco.....	3
	Hazard, F. R.....	Syracuse.....	40
	Hessler, Charles.....	East Syracuse.....	19
	Hiscock, G. B.....	Skaneateles.....	13
	Hoag, Mrs. Minnie A.....	Kirkville.....	16
	Hoag, William L.....	Tully.....	4
	Hollenbeck, Seward E.....	Tully, R. D. 1.....	*2
	Hotaling, Charles O.....	Memphis, R. D. 3.....	19
	Hunt, W. C.....	Fayetteville.....	100
	Jerome, Edwin S.....	Camillus.....	16
	Johnson, George N.....	Tully.....	6
	Kenney, Patrick.....	Memphis.....	1
	Kimber, Harvey C.....	Fayetteville.....	13
	Kinney, W. H.....	Elbridge.....	45
	Kinyon, Fred.....	Marcellus.....	7
	Knapp, E. H., & Son.....	Fabius.....	110
	Lade, William C.....	Kirkville.....	7
	Lewis, Ray.....	Warner.....	3
	Long Meadow Land Co.....	Syracuse.....	31
	Loomis, Frank W.....	Delphi Falls.....	*10
	McLennan, Donald F.....	Syracuse.....	27
	Male, James.....	Solvay.....	380
	Martin, E. A.....	Syracuse, R. D. 2.....	12
	Melvin & Godfrey, Inc.....	Baldwinsville.....	160
	Melvin, R. C.....	Liverpool.....	25
	Moyer, H. A.....	Syracuse.....	125
	Munro, F., & Son.....	Jordan.....	15
	McNash, B. D.....	Fabius.....	2
	Neil, James F.....	Warner, R. D.....	1
	Nichols, E. E.....	Marcellus, R. D. 2.....	14
	Nottingham Bros.....	Syracuse.....	55
	Osborn, Menzo J.....	Memphis.....	16
	Padget, H. G., M.D.....	Tully.....	5

*Including pure-breds not registered.

CATTLE — HOLSTEIN FRIESIAN

411

County in which stock is located	Owner	Address	Number of animals
Onondaga.....	Parsons, W. A.....	Camillus.....	9
	Peck, J. P.....	Kirkville.....	16
	Pendergast, S. C.....	Phoenix.....	100
	Pendergast, S. W.....	Phoenix.....	13
	Pierce, D. A., & Graff, John.....	Syracuse.....	*24
	Powell, E. A.....	Syracuse.....	100
	Price, H. T.....	Liverpool.....	20
	Reagan, John C.....	Tully.....	90
	Reichert, Frederick.....	East Syracuse.....	8
	Richburg, Orlo I.....	Oran.....	5
	Rienhardt, John E.....	2216 Cortland Ave., Syracuse.....	8
	Scammell, W. A. (See Cran- dall, S. W.)		
	Schuyler, Philip D. & P. J..	Camillus.....	16
	Sears & Lanning.....	Liverpool.....	13
	Sherwood, A. L.....	De Witt.....	7
	Smith, Wing R.....	Syracuse.....	60
	Snyder, Ernest C.....	Cazenovia, R. D. 2.....	14
	Spencer, George A.....	Tully.....	8
	Syracuse State Institution..	Syracuse.....	4
	Taylor, C. L.....	Kirkville.....	7
	Townsend, Jay G.....	Memphis.....	5
	Truckell, G. H.....	Liverpool.....	3
	Tully Farms.....	Tully.....	52
	Vann, Irving D.....	504 Dellaye Bldg., Syracuse. (Farm at Baldwinsville, R. D. 4)	*8
	Weller, John.....	Lysander.....	8
	Whitman, J. H.....	Jordan.....	23
	Wilcox, Wm. O.....	Manlius.....	46
	Wilson, C. H.....	Jordan.....	12
	Wortman, T. B.....	Lysander.....	5
	Wyckoff, A. G.....	Marcellus.....	31
	Jerome, J. S., & Son.....	Camillus.....	30
Ontario.....	Cook, Arthur M.....	Canandaigua.....	25
	Donnelly, J. W.....	Phelps.....	9
	Gillis, H. R.....	Victor.....	25
	Hamlin, Geo. D., M. D....	Naples.....	6
	Reed, Roy W.....	Hemlock.....	6
	Wallace, Fred C.....	Canandaigua.....	4
Orange.....	Arfmann, John.....	Middletown.....	125
	Ayres, George.....	Bullville.....	3
	Beemer, W. H. & E. J.....	Unionville.....	6
	Blizzard, Fred.....	Westtown.....	*5
	Brown, John K.....	Walden.....	*25
	Brown, Walter H.....	Salisbury Mills.....	11
	Bull, E., jr.....	Stony Ford.....	10

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Orange.....	Burger, Wm. H.....	Pine Bush.....	1
	Coleman, C. B.....	Goshen.....	4
	Conkling, William C.....	New Milford.....	1
	Courter, John S.....	Washingtonville.....	19
	Couser, T. B.....	Montgomery.....	3
	Cousins, Francis.....	Montgomery.....	5
	Crawford, Wm.....	Monroe.....	6
	Creeden, C. E.....	Slate Hill.....	*19
	Crist, Frank M.....	Montgomery.....	10
	Crowell, J. W.....	Walden.....	44
	De Vine, Dr. J. F.....	Goshen.....	3
	Dineen, Matthew.....	Montgomery.....	1
	Du Bois, Elting.....	Pine Bush.....	48
	Du Bois, Jesse.....	Walden.....	64
	Dunn, Grover Cleveland...	Unionville.....	5
	Dunning, M. E.....	Middletown, R. D. 2.....	30
	Durland, Wilbur A.....	Florida.....	13
	Earl, Fred P.....	Craigville.....	12
	Findly, Jas. A. D. S.....	Salisbury Mills.....	45
	Fleming, S. J.....	Walden.....	45
	Gandineer & Zickler.....	Montgomery.....	5
	Gerow, Clarence H.....	Washingtonville.....	60
	Gibbs, R. E.....	Johnson.....	11
	Gillen, Chas. H.....	Howells.....	4
	Goble, J. O.....	Florida.....	18
	Godeffroy, A. E.....	Godeffroy,.....	7
	Green Hill Farm.....	Goshen.....	6
	Hallock, Chas. J.....	Washingtonville.....	35
	Harlow, C. W.....	Crystal Run.....	*7
	Hawkins, Ira A.....	Warwick.....	*41
	Hein, Richard H.....	Little Britain.....	2
	Horton, W. H.....	Maybrook.....	5
	Houghton Farm.....	Mountainville.....	15
	Houlihan, John.....	Montgomery.....	1
	Houston, James I.....	Middletown, R. D. 2.....	4
	Howell, Geo. E.....	Howells.....	25
	Hoyt, C. W.....	Middletown.....	*41
	Hunter, C. S.....	Oxford Depot.....	22
	Hunter, Charles W.....	Newburgh, R. D. 3.....	64
	Jessup, Chas. L.....	Florida.....	3
	Johnston, Josephus.....	Walden.....	17
	Kaliniak, Thomas.....	Stony Ford.....	10
	Kattmann, Frederick A....	Montgomery.....	12
	Lawrence, C. F.....	Middletown.....	25
	Loring, J. D.....	Florida.....	32
	Lynch, Patrick.....	Stony Ford.....	2
	McEwen, G. W.....	Middletown.....	18

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Orange.....	McKinney, John C.....	Montgomery.....	19
	McKinney, J. Todd.....	Montgomery.....	8
	McMullen, John.....	Unionville.....	4
	Manning, Albert.....	Otisville.....	25
	Mapes, Jesse E.....	Middletown.....	6
	Miller, W. S.....	New Hampton.....	1
	Morrison, R. E.....	Little Britain.....	*1
	Morrissey, L. D.....	Walden.....	5
	Morrissey, Martha J.....	Walden.....	4
	Mould, Wm. J.....	Montgomery.....	12
	Mulliner, A. D.....	Rock Tavern.....	32
	Ogden, Fred D.....	Middletown.....	10
	Rider, N. B.....	Oxford Depot.....	15
	Roe, John K.....	Florida.....	2
	Schmid, Julius.....	Montgomery.....	165
	Schuman, Paul.....	Walden.....	11
	Seacord, W. H.....	Campbell Hall.....	46
	Seaman, Fred.....	Salisbury Mills.....	10
	Seely, H. D.....	Goshen.....	80
	Shaw, C. B. & J.....	Rock Tavern.....	11
	Slaughter, E. W.....	Crystal Run.....	30
	Smith, Edward P.....	Monroe.....	20
	State Homeopathic Hospital.	Middletown.....	1
	Stevens, Seely.....	Monroe.....	19
	Stickle, Orlando H.....	Montgomery.....	7
	Taylor, Loyd.....	New Milford.....	22
	Tears, Ira J.....	Walden.....	10
	Tuthill, F. D., & Son.....	Washingtonville.....	16
	Vail, Harry.....	New Milford.....	45
	Van Alst, Moses M.....	Pine Bush.....	1
	Van Alst, Mrs. Moses M...	Pine Bush.....	5
	Van Keuren, J. H.....	Rock Tavern.....	6
	Youngs, Norman M.....	Oxford Depot.....	2
	Zilver, Joseph.....	Montgomery.....	5
Orleans.....	Beckwith, J. G.....	Albion.....	20
	Boyle, Wm. H.....	Medina.....	4
	Haines, L. M. & W. C.....	Albion.....	4
	Holland, Albert W.....	Brice.....	16
	Holland, Robert B.....	Holley.....	15
	Hudson, Joseph B.....	Holley.....	15
	La Mont, Geo. B.....	Albion.....	1
	Ludington, V. D., & Son...	Holley.....	12
	Matson & Holland.....	Holley.....	34
	Merrill, G. L.....	Albion.....	15
	Rodwell, J. H.....	Albion.....	6
	Strassenburgh, S. G.....	Morton.....	4
	Turner, George T.....	Holley.....	5

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Oswego.....	Allen, Glenn.....	Altmar.....	1
	Backus, R. V.....	Maple View.....	26
	Baker, Fred.....	Fulton, R. D. 1.....	9
	Barnard, James E.....	Fulton.....	3
	Bishop, George W.....	Hannibal.....	2
	Bettinger, J. H.....	Lacona.....	15
	Blanchard, Elton H.....	Mexico.....	36
	Blount, A. T.....	Lacona.....	57
	Bogardus, Elmer.....	Fulton.....	10
	Brackett, Manly.....	Fulton.....	7
	Brown, H. O.....	Oswego.....	3
	Burdick, Jesse D.....	Fernwood.....	1
	Burgess, Frank D.....	Phoenix.....	7
	Burr, Mary C.....	West Monroe.....	9
	Butts, H. S.....	Phoenix.....	9
	Calkins, L. A.....	Demster.....	6
	Castor, M. D.....	Redfield.....	1
	Chesbro, George F.....	Pennellville.....	31
	Chesbro, Mrs. Susan M.....	Phoenix.....	13
	Chesbro, W. R.....	Fulton, R. D. 4.....	15
	Clark, Cady H.....	Central Square.....	6
	Clark, H. L. & N. L.....	Pulaski.....	3
	Clute, J. V.....	South Granby.....	12
	Collins, H. R.....	Fulton.....	14
	Corey, C. F.....	Pennellville.....	24
	Corey, E. L.....	Fulton.....	11
	Crandell, F. L.....	Hannibal.....	5
	Dann, Jay B.....	Fulton.....	11
	Dausman, William.....	Pennellville.....	1
	Derosia, J. W.....	Mexico.....	10
	Druse, V. G.....	Phoenix.....	*9
	Elmer, O. R.....	Williamstown, R. D. 3.....	5
	Farrington, Grant.....	Pulaski.....	32
	Fenton, F. W.....	Altmar.....	2
	Foster, Chas.....	Fulton.....	7
	Frary, B. D.....	Pulaski, R. D. 4.....	11
	Fuller, V. R.....	Fulton, R. D. 7.....	9
	Graves, M. C. & Granville...	Fulton.....	5
	Green, Mrs. Ella N.....	Phoenix.....	5
	Greenwood, Paul.....	Fulton.....	12
	Gregg, W. P.....	Phoenix.....	6
	Gridley, James C.....	Central Square.....	3
	Gulliver, H. J., & Sons.....	Fulton, R. D. 4.....	4
	Hall, Clarence E.....	Phoenix.....	11
	Hamer, J. H.....	Lacona.....	5
	Hastings & Prescott.....	Lacona.....	40
	Hess, Chas. E., & Son.....	Phoenix.....	18

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Oswego.....	Hess, F. L.....	Phoenix, R. D. 2....	15
	Hicks, J. M.....	Fernwood.....	6
	Hilton, R. H.....	Pulaski.....	10
	Hollis, D. J.....	Lacona.....	45
	Holmes, Eugene.....	Fulton.....	10
	Houghton, Allen.....	Parish.....	7
	House, Glen W.....	Mallory.....	16
	Howe, L. C.....	Pulaski.....	12
	Hunter, William.....	Fulton.....	40
	Hutchins, Chas. C.....	Pulaski.....	4
	Ives, Robert G.....	Fulton, R. D. 3.....	1
	Johnson, George.....	Pennellville.....	1
	Karpinski, Henry J.....	Oswego.....	55
	Keene, E. C.....	Lacona.....	5
	Kelly, Alex.....	Redfield.....	1
	Kelsey, Monford S.....	Fulton.....	3
	Kinyon, C. E.....	Fulton, R. D. 7.....	2
	Kirch, C. V.....	Lacona.....	3
	La Rock, A. B.....	Parish.....	6
	Lilley, D. M.....	Pulaski.....	15
	Linstruth, John.....	Pulaski.....	41
	Lonis, Ernest J.....	Hannibal.....	12
	Loomis, A. H., & Son.....	Central Square.....	12
	Loomis, C. W.....	New Haven.....	10
	Loomis, J. B.....	Pulaski.....	50
	Loren, A. D.....	Central Square.....	10
	Loveland, C. K.....	Mapleview.....	4
	Loveland, John H.....	South Granby.....	24
	McKinney, F. D.....	Orwell.....	2
	Mack, F. W.....	Fulton.....	11
	Mackesy, Edmond.....	Phoenix.....	4
	Mattison, S. G., & Son.....	Altmar.....	10
	Mead Est., B. E.....	Lacona.....	38
	Meyers, Fred.....	Central Square.....	10
	Mowry, Oliver B.....	Mexico.....	25
	Norton, I. H.....	Sandy Creek.....	2
	Osborn, Allan L.....	Fulton.....	9
	Owen, Ralph E.....	Fulton.....	*6
	Perlit, Paul F.....	Colosse.....	1
	Porter, W. J.....	Central Square.....	1
	Potter, Charles G.....	Williamstown.....	2
	Prescott, H. A.....	Lacona.....	11
	Rappleye, W. S.....	Oswego, R. D. 2.....	*4
	Ray, H. G.....	Phoenix.....	12
	Rogers Brothers.....	Hannibal.....	2
	Rumsey, Guy L.....	Fulton.....	44
	Sanderson, E. J.....	Pulaski.....	6

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Oswego.....	Scheidleman, H. J.....	Central Square.....	11
	Seeber Bros.....	Hastings.....	31
	Shafty, Jesse R.....	Lacona.....	2
	Shattuck, Mrs. C. P.....	Fulton.....	30
	Shepard, F. C.....	Hannibal.....	4
	Sherman, Gilbert.....	Mexico.....	3
	Slater, W. H.....	Bernhards Bay.....	1
	Snyder, C. E.....	Fulton, R. D. 5.....	18
	Soule, F. C., & Sons..... (Vanderkamp Farms)	Cleveland.....	65
	Sponenberg, Ralph S.....	Phoenix.....	10
	Stevens, Henry, & Son.....	Lacona.....	175
	Stewart, John M.....	Fulton.....	10
	Stone, C. A.....	Mexico.....	11
	Stone, C. E.....	Sandy Creek.....	10
	Stowell, R. A.....	Phoenix.....	13
	Summerville, W. J.....	Fulton.....	22
	Taylor, Elmer E.....	Fulton.....	27
	Tift, W. H.....	Lacona.....	37
	Tucker, E. B.....	Hannibal.....	14
	Upton, Jay L.....	Sandy Creek.....	5
	Vanderkamp Farms. (See Soule, F. C., & Sons)		
	Wadsworth, M. N.....	Oswego.....	4
	Ware Bros.....	Fulton.....	22
	Washer, Thos. E.....	Pennellville.....	14
	Whitney, G. N.....	Mexico, R. D. 3.....	10
	Wilcox, C. A.....	Fulton, R. D. 7.....	44
	Wilder, C. D.....	Pulaski.....	26
	Wise, John H.....	Fulton, R. D. 3.....	40
	Woodard, John N.....	Lacona.....	13
	Yerdon, Norman.....	Redfield.....	*1
	Youngs, Wm.....	South Granby.....	2
Otsego.....	Ames, Sherman H.....	Richfield Springs, R. D.....	12
	Angell, O. T.....	Mount Upton.....	12
	Armstrong, C. J., & Sons...	Milford.....	48
	Arnold, D. F.....	Burlington Flats.....	11
	Arnold, Geo. W.....	Schenevus.....	28
	Bass, Edgar C.....	Edmeston.....	8
	Bennett, P. R.....	Milford.....	50
	Bernard, H.....	Schenevus.....	43
	Bilderbeck, H. D.....	South Hartwick.....	1
	Blencoe, Clyde H.....	Cooperstown.....	14
	Bloomfield, R. W.....	Richfield Springs.....	40
	Brown, Jay S.....	West Edmeston.....	25
	Bulson, Claude M.....	Schenevus.....	28
	Burdick, Alvin D.....	Burlington Flats.....	4

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Otsego.....	Burton, S. J., & Son.....	Worcester.....	12
	Carleton, David A.....	Edmeston.....	11
	Chase Bros.....	Cooperstown.....	9
	Curry, John A.....	Hartwick.....	2
	Cushman, E. K.....	Schuyler Lake.....	4
	Daniels, F. A.....	Otego.....	3
	Dann, J. R.....	Unadilla.....	*10
	Day, H. L.....	Oneonta.....	8
	Deuel, Emory D.....	Otego.....	10
	Doolittle, John.....	Edmeston.....	4
	Dupes, L. J.....	Edmeston.....	2
	Eason & Gray.....	Schuyler Lake.....	20
	Eckler, Emerson.....	Cherry Valley.....	6
	Enderlin, C. W.....	Otego.....	16
	Felton, E. A.....	West Edmeston.....	5
	Fitch, C. H., & Sons.....	Burlington Flats.....	42
	Flint, Howard W.....	Worcester.....	9
	Freer, C. B.....	Otego, R. D.....	40
	Gardner, Clarence E.....	Cooperstown.....	10
	Gates, Harold F.....	West Winfield.....	20
	Gifford, W. F. & M. B.....	Morris.....	22
	Griffith, Homer R.....	Unadilla Forks.....	10
	Halbert, Thomas E.....	Gilbertsville.....	38
	Hall, James N.....	Burlington Flats.....	12
	Harding, D. A.....	Otego, R. D. 1.....	*6
	Harding, Thomas.....	Gilbertsville.....	1
	Harrington, H. L.....	Hartwick.....	16
	Hathaway, K. J.....	Otego.....	*9
	Hickling, L. W.....	Edmeston.....	5
	Holdredge, A. A.....	West Burlington.....	4
	Hone, J. L.....	Cherry Valley.....	5
	Hooker, Floyd.....	Cherry Valley.....	13
	Hopkins, Fred S.....	Burlington Flats.....	6
	Horton, E. G.....	West Oneonta.....	6
	Howard, G. Lyle.....	West Edmeston.....	2
	Hoyt, Wesley.....	Maryland.....	10
	Ingalls, B. E.....	Hartwick Seminary.....	4
	Jarvis, Chas. E.....	Cooperstown.....	21
	Jarvis, E. M.....	Fly Creek.....	20
	Jarvis, Ira S.....	Hartwick Seminary.....	40
	Johnson, Ernest M.....	Richfield Springs.....	45
	Kelly, P. H.....	Burlington Flats.....	4
	Kinne, Lee.....	Hartwick Seminary.....	66
	Langworthy, F. C.....	West Edmeston, R. D. 1... ..	11
	Langworthy, H.....	Hamilton.....	24
	Loomis, Wm. C.....	Burlington Flats.....	*16
	McDonald, Alfred.....	Otego.....	5

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Otsego	McLaury Bros	Portlandville	40
	Maine, C. D.	West Edmeston	10
	Maxwell, J. P.	West Edmeston	45
	Montgomery, Richard M.	Richfield Springs	*3
	Moran, A. J.	Hartwick	13
	Mott, Elbert H.	Unadilla Forks	2
	Mott, Otis D.	Hartwick	12
	Musson, Fred	Gilbertsville	17
	Musson, S. H.	Gilbertsville	3
	Myer, C. F.	Otego	7
	Page, T. A., & Son	West Edmeston	60
	Parish, Henry R.	Oneonta	9
	Parish, Welcome H.	Laurens	11
	Parker, Harry N.	Edmeston	17
	Parker, Warren H.	Edmeston	86
	Parshall, H. E., & Sons	Cooperstown	18
	Pell-Clarke, Deaconess	Springfield Center	4
	Pope, Chester	Edmeston	4
	Potter, Frank D.	Oneonta, R. D. 2	27
	Potter, Leon J.	Oneonta	19
	Reed, J. D.	Richfield Springs	14
	Richardson, Alvin D.	Richfield Springs	4
	Robinson, Gustave A.	Richfield Springs	14
	Rockwell, John S.	Burlington Flats	50
	Root Brothers	Cooperstown	46
	Rowe, L. F.	Milford	21
	Rutherford, G. H.	Burlington Flats	15
	Sergeant, Ansel	Morris	9
	Smith, M., jr.	Richfield Springs	2
	Springer & Kelly	Springfield Center	4
	Starr, Wallace	Richfield Springs	25
	Stone, Wm. E.	Hartwick, R. D. 2	2
	Sweet, Walter J.	West Edmeston	22
	Talbot & Chase	Burlington Flats	26
	Talbot, Clarence A.	Edmeston	30
	Talbot, E. L.	Burlington Flats	37
	Talbot, F. B.	West Burlington	5
	Taylor, E. A., M. D.	Schuyler Lake	40
	Telford, C. L.	Edmeston	4
	Tobey, H. C.	Gilbertsville	10
	Truman, Ray S.	Exeter	20
	Wedderspoon, James R.	Cooperstown	8
	Welsh, Elmer	Edmeston	12
	Welch, I. T., & C. A.	West Edmeston	19
	Wetzel, Thomas J.	Richfield Springs	32
	Whipple, Claude	Cooperstown	3
	White, F. H.	Richfield Springs	51

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Otsego.....	Whiteman, Chas. G.....	Cherry Valley.....	1
	Williams, Fred S.....	Laurens.....	1
	Wing, Dwight R.....	Unadilla Forks.....	4
	Wolfen Bros.....	Burlington Flats.....	8
	Young, Chas. H.....	Mount Vision, R. D. 2.....	8
Putnam.....	Bailey, Oscar.....	Brewster.....	30
	Baldwin, J. V., & H. E.....	Patterson.....	42
	Beacon, Henry.....	Lake Mahopac.....	30
	Burton, C. W.....	Patterson.....	7
	Nichols, D. C.....	Patterson.....	5
	Penny, Geo. T., & C. E.....	Patterson.....	13
	Rutledge, Andrew.....	Patterson.....	16
	Sherwood, Clifford M.....	Brewster.....	8
Rensselaer.....	Armsby, Ardron L.....	Hoosick.....	1
	Baker, W. S.....	Buskirk.....	1
	Bentley, A. C.....	Berlin.....	14
	Brands, J. F.....	Brookview.....	17
	Brown, W. E.....	South Berlin.....	18
	Carpenter, Wm. M.....	Buskirk.....	13
	Cottrell, Myron N.....	Walloomsac.....	13
	Ellis, Chas. B.....	Stephentown.....	23
	Gifford, Frank A.....	Valley Falls.....	34
	Greene, F. J., & Son.....	Center Berlin.....	10
	Haswell, Robert A.....	Hoosick Falls.....	14
	Hayner, Irving E.....	Troy, R. D. 1.....	18
	Herrington, Edward D.....	Buskirk.....	18
	Herrington, Nathan W.....	Hoosick Falls.....	4
	Herrington, Wesley E.....	Hoosick Falls.....	2
	Klaer, Charles.....	Hoosick Falls, R. D. 3.....	5
	Latimer, Geo. P.....	Schaghticoke.....	8
	Lawrence, C. O.....	Schaghticoke.....	4
	Mattison, Frank.....	Buskirk.....	16
	Morse, Harry L.....	Upper Troy.....	15
	Moseley Bros.....	Buskirk.....	13
	Norton, Homer G.....	Johnsonville.....	5
	Pine, Burton L.....	Hoosick Falls.....	4
	Reynolds, R. C.....	Troy.....	35
	Russell, George.....	Hoosick Falls.....	5
	Satterlee, Henry.....	Berlin.....	*6
	Satterlee, J. H.....	Berlin.....	*8
	Sherman, A. H.....	Buskirk.....	9
	Sherman, Paul H.....	Johnsonville.....	8
	Sherman, Wesley.....	Buskirk.....	7
	Viele, Frank.....	Johnsonville.....	21
	Wood, Mrs. Walter A.....	Hoosick Falls.....	7
	Yates, Chas.....	Schaghticoke.....	1
	Yates, Wm. B.....	Melrose.....	11

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Rockland.....	Martens, P.....	Pearl River.....	15
	Mason, George S.....	Sloatsburg.....	10
	Meyers, Henry Von L.....	Suffern.....	1
St. Lawrence.....	Abbott, J. Henry.....	Gouverneur.....	10
	Adair, W. H.....	Lisbon.....	7
	Akin, Andrew G.....	Canton.....	15
	Akley, W. Earl.....	De Kalb Junction.....	12
	Ames, Frank W.....	Morristown.....	40
	Baird, George A.....	Winthrop.....	19
	Barber, O. L.....	Canton.....	10
	Bartlett, Charles W.....	Norwood.....	1
	Bartlett, Luther R.....	Norwood.....	14
	Bartlett, M. T.....	Norwood.....	14
	Beatty, L. T.....	Heuvelton.....	21
	Brannen, Laurence.....	Waddington.....	*10
	Breckenridge, Josiah.....	Pope Mills.....	5
	Breckenridge, P. S.....	Pope Mills.....	4
	Chambers, Chas. J.....	Winthrop.....	7
	Clark, George A.....	Plum Brook.....	5
	Clark, Horace N.....	Potsdam.....	28
	Clark, J. W.....	Gouverneur.....	4
	Clark, W. D., & Son.....	Norwood.....	25
	Contryman, C. W.....	Canton.....	10
	Coonradt, B. F.....	Brier Hill.....	6
	Covell, Willett B.....	Pope Mills.....	1
	Crapser Island Farms, Inc..	Waddington.....	2
	Crary, Frank.....	Canton.....	8
	Dandy, Joseph H., & Son..	Canton.....	20
	Daniels, L. K.....	Hammond.....	2
	DeLong, R. M.....	Ogdensburg.....	26
	Desmand, James.....	Waddington.....	2
	Dezell, W. A.....	Lisbon.....	9
	Donald, B. J.....	Brier Hill.....	15
	Donovan, J. G.....	Potsdam.....	16
	Doren, A. G.....	Ogdensburg.....	32
	Dority Bros.....	Hammond.....	18
	Douglas, Henry.....	Canton.....	89
	Douglas, Horace G.....	Norfolk.....	6
	Eggleston, Herbert E.....	Canton.....	1
	Evans, Clarence A.....	Hammond.....	5
	Evans, James.....	Norwood.....	1
	Fieldson, Samuel J.....	Heuvelton.....	11
	Flack, B. G.....	Lisbon.....	7
	Flanagan, C. J.....	Canton.....	25
	Forrester, H. J.....	Hammond.....	35
	Foss, D. M.....	Gouverneur.....	40
	Gadbois, Silas O.....	Brasher Falls.....	4

* Including pure-breds not registered.

CATTLE — HOLSTEIN FRIESIAN

421

County in which stock is located	Owner	Address	Number of animals
St. Lawrence.....	Gilmour, D. C.....	Morristown.....	18
	Gilmour, John M.....	Morristown.....	3
	Glass, William C.....	Madrid.....	2
	Gray, Frank.....	Brier Hill.....	20
	Grant, George E.....	South Hammond.....	23
	Gray, W. J. & Son.....	Lisbon.....	4
	Green, S. C.....	Oswegatchie.....	1
	Greene, H. L.....	Hammond.....	11
	Griffith, W. E.....	Madrid.....	1
	Haile, W. H. & M. H.....	Bigelow.....	20
	Harland, V. F.....	Gouverneur, R. D. 2.....	4
	Harriman, Barnett.....	Massena.....	3
	Hayden, C. J.....	Potsdam.....	*50
	Hewitt, R. H.....	Gouverneur.....	39
	Hoyt, Loyal L.....	Winthrop.....	3
	Hundley, T. T.....	Canton.....	1
	Hurst, John.....	Ogdensburg.....	9
	Hutchinson, Newell S.....	Heuvelton.....	17
	Jones, C. J., & Son.....	Madrid Springs.....	60
	Juby, Wm.....	Ogdensburg.....	6
	Judd, S. N.....	Canton.....	5
	Kastner, David W.....	Hammond, R. D. 1.....	34
	Kelsey, C. R.....	Hammond.....	11
	Kingston, L. J.....	Canton.....	10
	Knox, Harry M.....	Canton.....	30
	Lake View Farm (See Wheater, H. P.)		
	Langdon, Henry D.....	Canton, R. D. 5.....	4
	La Rue, David.....	Ogdensburg, R. D. 5.....	9
	Loomis, C. W.....	Ogdensburg.....	16
	Loucks, A. S.....	Hermon.....	1
	Lumley, W. H.....	Gouverneur.....	38
	McClure, Everett E.....	Heuvelton.....	4
	McCormick, J. D.....	Ogdensburg.....	1
	McIvor, Omer.....	Lisbon.....	13
	McMartin, Alfred.....	Rensselaer Falls.....	24
	Mahoney, John.....	North Stockholm.....	19
	Marshall, Clark H.....	Gouverneur.....	8
	Martin, Jay.....	Lisbon.....	3
	Moncrief, George.....	Hammond.....	1
	More, J. A.....	Hammond.....	2
	Morrison, B.....	Rensselaer Falls.....	22
	Murphy, A. W.....	Hammond.....	43
	Nichols, Samuel C.....	Waddington.....	4
	Nightengale, I. H.....	Massena Springs.....	1
	Ober, Riley H.....	Fort Jackson.....	1
	Oliver, A. D.....	Waddington.....	15

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
St. Lawrence.....	Orr, R. D.....	De Peyster.....	3
	Pease, W. B.....	Potsdam.....	*10
	Pelsue, G. L.....	North Stockholm.....	21
	Perry, Harvey.....	Hammond.....	15
	Pool, Merton L.....	Hermon.....	4
	Porteous, L. S.....	Lisbon.....	18
	Porter, Will J.....	Lisbon.....	3
	Putney, John M.....	Lisbon.....	1
	Pythian Home.....	Ogdensburg.....	28
	Randall, C. M.....	Gouverneur.....	20
	Richardson Bros.....	Hammond.....	30
	Robson, Alex.....	Lisbon.....	1
	Rodger, M. J.....	Hammond.....	40
	Rosegrant, Nelson.....	Ogdensburg.....	1
	Ross, Joseph.....	Rensselaer Falls.....	36
	Ryther, Albert G.....	Potsdam.....	4
	St. Lawrence State Hospital.....	Ogdensburg.....	10
	Scanlon, James R.....	Hammond.....	1
	Senter, Orville M.....	Canton.....	7
	Severance, Glen W.....	Gouverneur.....	12
	Seymour, John.....	De Kalb Junction.....	30
	Sharp, J. F.....	Ogdensburg.....	19
	Sharp, I. A.....	Ogdensburg.....	49
	Shiels, J. E.....	Morristown.....	7
	Soper, L. R.....	Hammond.....	28
	Soper, Ray E.....	Hammond.....	11
	Spear, Frank J.....	Potsdam, R. D. 4.....	2
	Speer, W. C.....	Ogdensburg, R. D. 4.....	12
	Sprye, E. M.....	Heuvelton.....	*13
	Stacy, Charles R.....	Canton.....	6
	State School of Agriculture..	Canton.....	8
	Steele, H. G.....	Heuvelton.....	3
	Steele, J. W.....	Heuvelton.....	13
	Stout, D. H., & T. B.....	Hammond.....	20
	Taylor, Hudson S.....	Potsdam.....	12
	Thompson, R. M.....	Heuvelton.....	40
	Tracy, C. D.....	Massena.....	48
	Tracy, Harlow C.....	Massena.....	12
	Tryon, C. D.....	North Stockholm.....	1
	Washburn, H. G.....	Heuvelton.....	33
	Weir, Frank.....	South Russell.....	*14
	Wheater, H. P..... (Lake View Farm)	Ogdensburg, R. D. 3.....	10
	White, Walter M.....	Madrid.....	1
	Whitney, Mrs. W. B.....	Gouverneur.....	10
	Williamson, John H.....	South Hammond.....	19
	Williamson, T. P.....	South Hammond.....	20

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
St. Lawrence.....	Willoughby, J. A.....	Norfolk.....	1
	Wilson, J. W.....	Hammond.....	5
	Wood, F. B.....	Gouverneur.....	17
	Woodcock, W. S.....	Edwards.....	125
	Woodside, A. E.....	Hammond.....	12
	Wright, Chelson S.....	Ogdensburg.....	9
	Zoller Bros.....	Hammond.....	27
Saratoga.....	Arnold, S. H.....	Wayville.....	4
	Cavert Bros.....	Hagaman.....	14
	Cleveland, Archie F.....	Round Lake.....	5
	Curtiss Bros.....	Ballston Spa.....	16
	Daniels, J. M.....	Greenfield Center.....	1
	Davey, Schuyler.....	Ballston Spa.....	9
	Davis, Robert A.....	Ballston Spa.....	19
	Grippin, Bartlett B.....	Saratoga.....	5
	Hawley, C. B.....	Waterford.....	35
	Keller & Tobler.....	Waterford.....	10
	McDonnell Brothers.....	Mechanicville, R. D. 2.....	1
	McMurray, Albert.....	Gansevoort.....	25
	Neilson, W. B., & C. W.....	Stillwater.....	14
	Ostrander, Wm. S.....	Schuylerville.....	65
	Purcell, Joseph M.....	Mechanicville.....	46
	Robinson, J. H.....	Ballston Spa.....	5
	Schwarz, Andrew.....	Elnora.....	1
	Smith, Arthur E.....	Waterford.....	9
	Smith, E. J.....	Saratoga, R. D. 2.....	1
	Teeling, A. W.....	Ballston Spa.....	1
	Warner, G. R.....	Saratoga Springs, R. D. 1...	*2
Schenectady.....	Batchelder, A. F.....	Scotia.....	40
	Droms, E. C.....	Schenectady, R. D. 7.....	6
	Eckrich, John D.....	Schenectady, R. D. 7.....	12
Schoharie.....	Beard, Franklin P., M. D...	Cobleskill.....	27
	Bellinger, I. Marvin.....	Seward.....	8
	Best, Jay W.....	Sharon Springs.....	10
	Bruce & Empie.....	Dorloo.....	*10
	Crosby Brothers.....	Carlisle.....	1
	Dow, D. C., jr.....	Cobleskill.....	60
	Dristle, Alden.....	Cobleskill.....	4
	Estes, John.....	Sloansville.....	7
	Frederick Brothers.....	Seward.....	16
	Guernsey, F. & C. R.....	Schoharie, R. D. 3.....	2
	Guernsey, Grover C.....	Schoharie, R. D.....	2
	Hilsinger, Myron.....	Cobleskill.....	5
	Holmes, Floyd M.....	Lawyersville.....	*40
	Kennedy, Wm.....	Cobleskill.....	1
	Keyser, Floyd B.....	Breakabeen.....	10
	Kilts, Daniel E.....	Seward.....	12

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Schoharie.....	King, E. A.....	Central Bridge.....	28
	Knapp, Will.....	Middleburgh.....	8
	Kniskern, Newton.....	Carlisle.....	7
	Lewis, Mrs. Matie.....	Gilboa.....	1
	Miller, Henry C.....	Cobleskill.....	11
	Olmstead, William P.....	Hyndsville.....	20
	Osterhout, Stanton.....	Cobleskill, R. D. 1.....	8
	Palmer, John E.....	Richmondville.....	6
	Parsons, Geo. A.....	Sharon Springs.....	2
	Planck, Charles B.....	Sharon Springs.....	21
	Rich, M. J.....	Seward.....	2
	Rockwell, E. I.....	Esperance.....	4
	Schuyler, James E.....	Cobleskill.....	32
	Shafer, D. R.....	Cobleskill.....	4
	Sidney, Wallace H.....	Central Bridge.....	65
	Simpkins, Lester A.....	Carlisle.....	1
	Stringer, Geo. O.....	Sharon Springs.....	7
	Vanaller, Riley.....	Middleburgh.....	5
	Van Valkenburg, Arthur S..	Sharon Springs.....	6
	Veeder, R. B.....	Sloansville, R. D.....	6
	Walker, Warner J.....	Cobleskill.....	7
	Wright, A. L.....	Central Bridge.....	1
	Young, A. E.....	Cobleskill.....	4
Schuyler.....	Bales, Lee.....	Cayuta.....	9
	Bolt, Eugene N.....	Watkins.....	5
	Ervay, Geo. F.....	Alpine.....	5
	Fowler, Wm. H.....	Alpine.....	9
	Hausner, C. W.....	Odessa.....	10
	Huston, W. B.....	Hector.....	6
	Lawhead, W. H.....	Cayuta.....	6
	Linderberry, J. H.....	Cayuta.....	9
	Moore, A. J.....	Beaver Dams.....	8
	Smith, Lew C.....	Cayuta.....	11
Seneca.....	Terybery, Peter.....	Hector.....	1
	Keady, John W.....	Lodi.....	1
	Mellen, Charles R.....	Geneva.....	1
	Seeley, R. F.....	Waterloo.....	20
	Yale Farm.....	Romulus, R. D. 1.....	*24
Steuben.....	Acker, F. M., & Son.....	Hornell, R. D. 6.....	14
	Armsted, Cassie B.....	Hornell.....	16
	Barney Bros.....	Andover, R. D.....	22
	Bassett, W. C.....	Canistota.....	3
	Bennett, Bert.....	Hornell.....	12
	Bennett, Fay.....	Hornell.....	20
	Bennett, Miles.....	Hornell, R. D. 4.....	14
	Boucher, Andrew.....	Rexville.....	3
	Bowlby, Helene B.....	Bath.....	38

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Steuben	Brasted, D. L.	Hornell, R. D. 4	18
	Bridge, A. L., & Son.	Arkport, R. D. 3	2
	Brown, L. H.	Hammondsport	25
	Brutsman, H. F.	Troupsburg	14
	Burdick, L. H.	Hornell	25
	Button, A. A.	Jasper	17
	Cady, Seward A.	Troupsburg	1
	Calkins, E. S.	Avoca	24
	Calkins, I. J.	Avoca	6
	Carter, E. Burr	Hornell	9
	Caston, N. E.	Greenwood	40
	Chase, M. S.	Rexville	6
	Chittenden, C. W.	Adrian	10
	Clancy, W. J.	Alfred Station	21
	Clym, George	Avoca	12
	Cobb, Churchill	Greenwood	23
	Coleman, Daniel	Rexville	4
	Dartt, Sterry F.	Jasper	18
	Davis, H. E., & Travis, J.	Cameron	1
	Day, Frank H.	Rexville	15
	Dempsey, T. M.	Rexville	6
	Dennis, Andrew F., & Son.	Cameron	16
	Dennis, Leon S.	Jasper	28
	Dennis, Ross W.	Jasper	47
	Dennis, Walter	Greenwood, R. D. 1	4
	DeWitt, C. B.	Bradford	*5
	Drake, Francis E.	Canisteo	4
	Dunkell, W. B.	Jasper	*11
	Emerson, Albert W.	Bath	*14
	Ersley, L. W.	Greenwood	10
	Evans, Ira L.	Hornell, R. D. 2	5
	Flint, M. B., & Sons	Hornell	25
	Gardner, Arthur	Cohocton	1
	Gick, J. (See Robinson, H.)		
	Haag, Nicholas	Cohocton	8
	Hadlock, Grover C.	Hammondsport	1
	Harkenrider, Wm	Rexville	9
	Harrington, B. F.	Rathbone	11
	Hassey, C. A.	Woodhull	3
	Heinaman, Ed	Bath, R. D. 3	12
	Hewlett, John M.	Bath	20
	Hilborn, L. E.	Canisteo	3
	Hollenbeck, M. C.	Jasper	7
	Hopkins, Fred	Wallace	18
	Hurlbut Bros	Arkport	18
	Jamison, E. J., & Son.	Adrian	5
	Keefe, John P.	Rexville	41

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Steuben	Kelley, Alex.	Greenwood	15
	Kilbury, Chas.	Arkport, R. D. 3	9
	Knight, Menzo	Canisteo	3
	Latimer, F. H.	Arkport	24
	Lewis, G. C.	Greenwood	30
	Lewis, George S.	Rexville	13
	Lewis, Sidney A.	Campbell	*8
	Marland, James	Corning, R. D. 3	9
	Marlatt, O. B.	Cameron	7
	Miller, D. L.	Jasper	5
	Murphy, Geo. A.	Jasper	25
	Nelly, Mrs. Dellie H.	Hammondsport	5
	Nicholson, F. D.	Hornell	9
	Norton, B. F.	Canisteo	15
	O'Hargan, John	Rexville	21
	Ostrander, R. C.	Canisteo	11
	Parker, Chas. A.	Rexville	12
	Parker, J. D.	Campbell	6
	Pease, William E.	Greenwood	7
	Peck, L. L.	Kanona	10
	Potter, G. E. & B. L.	Canisteo, R. D. 1	11
	Puchin, A. A.	Hornell	12
	Randall, J. S.	Avoca	18
	Rauber, John S., & Sons	Almond	21
	Redmond, Daniel	Avoca	8
	Reynolds, C. F.	Woodhull, R. D. 1	25
	Robinson, H., & Gick, J.	Hornell	7
	Robinson, T. W.	Bath	18
	Rollin, Peter	Greenwood	13
	Savage, S. N.	Troupsburg	2
	Schenck, J. E.	Jasper	20
	Shaul, A. H.	Jasper	16
	Smith, Bert D.	Addison	11
	Smith, Wm.	Hammondsport	*5
	Snow, W. B.	Rexville	30
	Stephens, Bert	Canisteo, R. D. 1	7
	Stephens, E. B.	Canisteo, R. D. 1	18
	Stephens, H. L.	Canisteo	22
	Symonds, Elmer	Woodhull	5
	Taylor, Mervin H.	Bath	11
	Titus, Lewis W.	Presho	5
	Toby, Harrison B.	Lindley	20
	Travis, J. (See Davis, H. E.)		
	Tubbs, C. W.	Woodhull	25
	Turner, Otis	Jasper	20
	Van Buskirk, S. B., & Son	Hornell	40
	Van Fleet, Ray	Jasper	3

* Including pure-breds not registered

CATTLE — HOLSTEIN FRIESIAN

427

County in which stock is located	Owner	Address	Number of animals
Steuben	Van Orman, W. H.	Cameron	14
	Van Wie, Wesley	Harrison Valley, Pa.	20
	Vastbinder, B.	Addison	27
	Waight Bros.	Jasper	4
	Walker, Leonard B.	Bath	12
	Wallace, E. E.	Jasper	9
	Watkins, Geo. J., & Son	Bath	7
	Weaver, Chas. F.	Bath	5
	Wheeler, Oscar, & Sons	Hornell, R. D. 5	6
	White, D. M.	Bath	25
	Whiteman, Bert	Canisteo	*12
	Whiteman, J. C.	Jasper	1
	Wilcox, Edgar T.	Hornell, R. D. 1	21
	Wildrick, Menzo	Woodhull	17
Suffolk	Central Islip State Hospital	Central Islip	1
	Ferguson, E. M., & W	Fisher's Island	2
	Kings Park State Hospital	Kings Park	2
	Robbins, Harry Pelham (Farm at Southampton)	52 Vanderbilt Ave., New York	4
	Tomlinson, J. C.	Huntington	16
Sullivan	Tuthill, F. H., & Son	Rocky Point	2
	Bishop, Fred	Fremont Center	1
	Brown, Sidney	Livingston Manor	1
	Brown, Wm. J.	Jeffersonville	1
	Bunger, C. H.	Ferndale	48
	Burton, Norman	Livingston Manor	6
	Cairns, Chester T.	Roscoe	8
	Canthers, John B.	Centerville Station	*3
	Clements, D. H.	Liberty	*9
	Cox, Joseph	Stevensville	2
	Crary, W. R.	Liberty	6
	Cross, Jerome	Eureka	1
	Dannemann, Philip C.	Fosterdale	1
	Fiero, W. M.	High View	4
	Fuhrer, Wm. C.	Kenoza Lake	1
	Geib, Charles	Callicoon	1
	George, John	Eureka	1
	Hilbrigel, Geo.	Callicoon	1
	Kellam, Wm.	Fremont Center	1
	Kiel, Ernest H. S.	Stevensville	38
	Knapp, E. D.	Winterton	25
	Kraut, Herman	Jeffersonville	1
	Le Roy, Marvin	Loch, Sheldrake	8
	Levine, Louis	Fallsburgh	1
	Loomis Sanatorium	Loomis	2
	McCullough, Andrew	Monticello	7
	Menges, Jacob	Youngsville	1

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Sullivan.....	Menges, Wm.....	Youngsville.....	1
	Mitchell, John.....	Monticello.....	2
	Moore, E. P.....	Divine Corners.....	30
	Osborn, Frank H.....	Monticello.....	3
	Pelton, Floyd I.....	Monticello.....	8
	Pelton, John L.....	Monticello.....	23
	Potter, Marcus S.....	Wurtsboro.....	20
	St. Joseph's College.....	Callicoon.....	4
	Schick, Anthony.....	Obernburg.....	1
	Schmidt, George F.....	North Branch.....	1
	Slater, Emmet.....	Grahamsville.....	10
	Smith Bros.....	Jeffersonville.....	7
	Thorey, A. B.....	Jeffersonville.....	1
	Townsend, George L.....	Fosterdale.....	9
	Townsend, John.....	Stevensville, R. D. 1.....	6
	Wagner, Peter.....	Hankins.....	1
	Wilcox, James.....	Fremont Center.....	1
	Wilson, August.....	Jeffersonville.....	6
	Woodman, Joel H.....	Hortonville.....	1
Tioga.....	Ackley, W. F.....	Lockwood.....	1
	Albro, Wells G.....	Lounsberry.....	14
	Allen, Luke J.....	Willseyville.....	5
	Anderson, C. D. & Blewer, F. A.....	Owego.....	47
	Andrews, F. S.....	Owego, Star Route.....	13
	Andrews, George.....	Berkshire.....	34
	Andrus, Thomas.....	Lockwood.....	6
	Ball, George P.....	Berkshire.....	1
	Ball, Stephen L.....	Berkshire.....	3
	Ball, W. H.....	Newark Valley.....	7
	Birch, Herbert W.....	Newark Valley.....	22
	Blewer, Fred A. (<i>See also</i> Anderson, C. D.).....	Owego, R. D. 3.....	120
	Blewer Est., George F.....	Newark Valley.....	90
	Bostwick, H. F. C.....	Waits.....	10
	Brown, George W.....	Berkshire.....	5
	Brown, Harry D.....	South Apalachin.....	14
	Clark, L. H.....	Waits.....	7
	Crisfield, G. B.....	Lockwood.....	4
	Dorn, W. C. (<i>See Hart, I. S.</i>)		
	Edgecomb, G. B.....	Waverly.....	12
	Ellsworth, Webster H.....	Nichols.....	10
	Giles, C. F.....	Apalachin.....	27
	Graves, E. W.....	South Apalachin.....	20
	Gridly, Charles F.....	Candor.....	11
	Harris, R. C.....	Nichols.....	6
	Hart, I. S. & Dorn, W. C....	Candor.....	5
	Hilbert, Fred E.....	Candor.....	13
	Hill, Fred C.....	Owego.....	28

County in which stock is located	Owner	Address	Number of animals
Tioga.....	Hills, Elmer T.....	Newark Valley.....	8
	Hooker, Fred B.....	Newark Valley.....	*1
	Hoyt, F. D., Estate.....	Halsey Valley.....	17
	Kelsey, Marion C.....	Candor.....	1
	Kenyon, R. G.....	Newark Valley.....	1
	Latimer, J. C.....	Tioga Center.....	77
	McLeese, J. C.....	Candor.....	1
	Lerche, Mr. & Mrs. Fred W.	Owego.....	9
	McNeil, Frank.....	Lounsberry.....	5
	McPherson, George B.....	Newark Valley.....	15
	Manning, Fred.....	Waverly.....	45
	Marsh, Henry.....	Richford.....	16
	Marshland Farm (See Tracy & Foster).		
	Mayor, Charles, & Son....	Berkshire.....	4
	Mead, Lewis J., & Son....	Newark Valley.....	18
	Meddaugh, P. C.....	Candor.....	15
	Miller, Edward H.....	Owego.....	25
	Norris, John.....	Waverly.....	2
	Noteware & Son.....	South Apalachin.....	8
	Overlander, A. J.....	Owego.....	14
	Palmer, H. L.....	Spencer.....	5
	Pembleton, John G.....	Owego.....	43
	Personeus, Melvin.....	Candor.....	1
	Polley, Fred.....	Richford.....	2
	Rice, W. N.....	Berkshire.....	6
	Riker, William H.....	Spencer.....	8
	Robinson, J. R.....	Owego.....	28
	Rowe, Howard N.....	Spencer.....	17
	Royce, Cecil M.....	Berkshire.....	22
	Russell, Ulysses G.....	Nichols.....	14
	Sabin, W. P.....	Spencer.....	40
	Sager, Charles.....	Halsey Valley.....	7
	Santee, J. H.....	Campville.....	4
	Satterly, Alver C.....	Berkshire.....	4
	Sawyer, S. F.....	Candor.....	8
	Smith, Jabez.....	Newark Valley.....	120
	Smith, Lawrence F.....	Lockwood.....	2
	Starkweather, G. C.....	Berkshire.....	20
	Stetler, Lloyd.....	Barton.....	3
	Storm, Charles C.....	Candor, R. D. 3.....	2
	Stoughton, S. R.....	Newark Valley.....	1
	Thuillard, H., & Son.....	Berkshire.....	17
	Tobey, Daniel.....	Apalachin.....	12
	Tracy & Foster..... (Marshland Farm)	Apalachin.....	45
	Valley View Farms.....	Lounsberry.....	41

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Tioga.....	Van Gelder, J. E.....	Owego.....	21
	Whitmarsh, Simon.....	Catatonk.....	12
	Wilcox, W. W.....	Waverly.....	1
	Winters, Byram L.....	Smithboro.....	85
	Woodford, Charles B.....	Candor.....	4
	Yates, Laurence J.....	Owego.....	23
Tompkins.....	Agard, John.....	Trumansburg.....	2
	Alken Farm.....	Ithaca, R. D. 2.....	42
	Allen, F. R.....	Ithaca.....	32
	Baker, Dr. Eugene.....	Ithaca.....	30
	Ballard, Charles.....	McLean.....	*21
	Besemer, Willis G.....	Brookton.....	1
	Biggs, F. C.....	Trumansburg.....	43
	Brown, F. E.....	Freeville.....	9
	Brown, P. F.....	Trumansburg.....	3
	Bruce, Chas. E., & Son.....	Ithaca, R. D. 4.....	3
	Bull, George M.....	Slaterville Springs.....	10
	Bull, J. R.....	Brookton.....	7
	Chapman, Jay W.....	Groton.....	16
	Chatfield, A. D.....	Freeville.....	9
	Chatfield, Ralph.....	Freeville.....	1
	Clark Estate, B. P.....	Groton.....	1
	Clark, Charles M.....	Groton.....	4
	Clark, M. C.....	Groton.....	22
	Colegrove, Carr S.....	Ithaca, R. D. 5.....	8
	Cornell University.....	Ithaca.....	63
	Dassance, Albert A.....	Newfield.....	*6
	Dates, J. D.....	Groton.....	6
	Davis, F. E., & Son.....	Ludlowville, R. D. 9.....	10
	Dedrick, R. B.....	Dryden.....	20
	Donley, Halsey.....	Dryden.....	8
	Dorn, F. E.....	Brookton.....	1
	Earsley, M. G.....	Ithaca.....	12
	Fairchild, C. B.....	West Danby.....	5
	Fish, Wilber G., M.D.....	Ithaca.....	3
	Fulkerson, V. S.....	Freeville.....	5
	Galusha, D. K.....	Groton.....	10
	Gray Brothers.....	Ithaca.....	55
	Gridley, K. H.....	Dryden.....	3
	Griswold, C. D.....	Dryden.....	16
	Halsey, Grant H.....	Groton.....	5
	Haring, Purley.....	Groton.....	2
	Hawes, F. L.....	Ithaca.....	2
	Hill, E. S., & Son.....	Freeville.....	24
	Hopper, H. A.....	Ithaca.....	12
	Hopper, N. F.....	Ithaca.....	59
	Jones, D. B.....	Groton.....	5

* Including pure breeds not registered.

County in which stock is located	Owner	Address	Number of animals
Tompkins.....	La Mott, F. P.....	Freeville.....	30
	Lane, Lewis B.....	Groton.....	10
	Lathrop, J. A.....	Freeville.....	4
	Lewis, F. B.....	West Danby.....	3
	Loomis, H. C.....	Freeville.....	13
	Marshall, Edward, & Sons..	Ithaca.....	43
	Merchant, Edward.....	Freeville.....	22
	Metzger, L. A.....	Groton.....	5
	Metzger, M. G., & Son.....	Groton.....	6
	Miller, A. S.....	Ithaca, R. D. 3.....	3
	Mott, C. A.....	Freeville.....	23
	Nye, J. G.....	Groton.....	9
	Page, T. R.....	Groton.....	1
	Parshall, Fred.....	West Danby.....	*8
	Payne, Fred W.....	Newfield.....	2
	Pearsall, A. O.....	Trumansburg.....	*6
	Pearson, Raymond A.....	Ithaca, R. D. 3.....	2
	Pierson, W. G.....	Etna.....	2
	Preston, A. L.....	Cortland.....	15
	Quick, H. F.....	Brookton, R. D. 21.....	13
	Rorapaugh, C. B.....	Ithaca.....	11
	Shaver, W. J., jr.....	Freeville.....	4
	Skilling, Fay.....	Freeville.....	1
	Snyder, Earl J.....	West Danby.....	30
	Spaulding, H. A.....	Groton.....	15
	Speed, Robert L.....	Slaterville Springs.....	4
	Sweetland, M. F.....	Dryden.....	12
	Tarbell, Edward D.....	McLean.....	9
	Todd, F. A., & Son, & Todd, Rodger.....	West Danby.....	5
	Troy, W. J.....	Ithaca.....	55
	Tupper, J. T., & Sons.....	West Danby.....	28
	Updike, Fred.....	Trumansburg.....	9
	Weed, C. J.....	West Danby.....	6
	Weed, D. M.....	West Danby.....	14
	Williams, G. O.....	Ithaca, R. D. 5.....	4
	Youmans, Frank A.....	McLean.....	1
Ulster.....	Barnes, I. C.....	New Paltz.....	2
	Craig, Wilmer H.....	High Falls.....	2
	Decker, B. H.....	Wallkill.....	14
	Decker, David M.....	New Paltz.....	31
	Decker, F. W.....	Wallkill.....	15
	De Witt, C. N.....	Hurley.....	*11
	DeWitt, Matthew Ten Eyck	Hurley.....	1
	Dodge, James E.....	New Paltz.....	12
	DuBois, Frank.....	Wallkill.....	31
	DuBois, Joseph.....	Wallkill.....	24

*Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Ulster.....	DuBois, Philip H.....	New Paltz.....	10
	Hansen, John C.....	Wallkill.....	5
	Hartshorn, W. S.....	Gardiner, R. D. 2.....	5
	Hoornbeck, Louis A.....	Napanoch.....	5
	Jenkins, Herman D.....	New Paltz.....	5
	Leggett, Francis H., Est....	Stone Ridge.....	5
	Low, H. L.....	Wallkill.....	40
	Lozier, F. E.....	Wallkill, R. D. 3.....	8
	McCord, George E.....	Wallkill.....	11
	McElhone, W. W.....	Wallkill.....	12
	Misner, Henry.....	Dairyland.....	35
	Neff, Wilfred H.....	Kyserike.....	16
	Payne, Philip B.....	Wallkill.....	5
	Roth, L. E. (See Sanford, H. C.)		
	Sahler, C. O.....	Kingston.....	10
	Sahler, M. J.....	Kerhonkson.....	3
	Sanford, H. C., & Roth, L. E.	New Paltz.....	2
	Schoonmaker, D. E.....	Accord.....	12
	Schoonmaker, Egbert.....	High Falls.....	*5
	Schoonmaker, Ervin J.....	Kyserike.....	42
	Schoonmaker, F. G.....	Wallkill.....	8
	Schoonmaker, Selah.....	Gardiner.....	35
	Signor, William C.....	Stone Ridge.....	15
	Smith, Moses.....	Wallkill.....	43
	Townsend, A. B.....	Greenfield.....	4
	Van Etten, John G.....	65 John St., Kingston.....	40
	Van Wyck, William W.....	Gardiner, R. D. 1.....	*14
	Woolsey, Arthur.....	Saugerties.....	2
	Young, Chester.....	Napanoch.....	22
Warren.....	Haviland, Jas., Est.....	Glens Falls.....	50
	Parrott, Edward M.....	Lake George.....	13
	Wieler, E. H., & Sons.....	Warren.....	26
Washington.....	Adams, D. W., & Son.....	Whitehall.....	4
	Alexander, Fred, & Sons....	Hudson Falls.....	15
	Austin Bros.....	Salem.....	2
	Batchelder, A. C.....	Fort Ann.....	2
	Beadle, J. H.....	Hartford.....	12
	Best, Dan P.....	Whitehall.....	2
	Braymer, Albert.....	Granville.....	23
	Briggs, Eugene T.....	Greenwich.....	2
	Brown, A. B.....	Shushan.....	6
	Brown, Hugh I.....	Shushan.....	2
	Bump, H. V.....	Cambridge.....	24
	Carter, Henry C.....	Coila.....	5
	Cleveland, Albert B.....	Salem.....	3
	Connolly, M. J.....	Cambridge.....	26
	Conway, John J.....	Buskirk.....	*12

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Washington.....	Darrow, Jay.....	Salem.....	*3
	Dougan, Lewis M.....	Middle Granville.....	13
	Ellis, Ulysses G.....	Ft. Edward.....	61
	Farwell & Cook.....	Hampton.....	35
	Ferguson, Albert.....	Salem.....	7
	Fisher, Warren D.....	Cambridge.....	7
	Foster, John W.....	Argyle.....	8
	Gibson, Jess.....	South Hartford.....	20
	Gillis, Theodore.....	Salem.....	8
	Gilman, Geo. L.....	Granville.....	3
	Gray, Henry, & Son.....	Greenwich.....	75
	Great Meadow Prison.....	Comstock.....	1
	Hanna, C. S.....	West Hebron.....	4
	Hatch, C. P.....	Cambridge.....	21
	Hicks, Mansir Waite.....	Granville.....	1
	Hollister, S.....	Whitehall.....	30
	Jenkins, Albert.....	Granville.....	9
	Johnston, John W.....	Salem.....	8
	Kerr, Edwin M.....	Cambridge, R. D. 1.....	6
	Mahaffy, George.....	Salem.....	35
	Maynard, A. J.....	Hartford.....	4
	McConnell, J. T.....	Granville.....	10
	McGeoch, G. E.....	Cambridge.....	17
	McLenithan, Austin J.....	Cambridge.....	110
	McMillan, Chas.....	Cambridge.....	2
	McMore, Thurman F.....	Whitehall.....	50
	Neddo, Henry.....	Whitehall.....	4
	Nichols, Ransom.....	Ft. Edward.....	19
	Norton, Alfred N.....	Whitehall.....	25
	Parker, C. E.....	Granville.....	..
	Pierce, Albert.....	Greenwich.....	11
	Potter, Marcus D.....	Granville.....	15
	Pratt, Simon N., & Son.....	Cossayuna.....	4
	Race, V. W.....	North Granville.....	3
	Rea, John A.....	Cambridge, R. D. 1.....	14
	Reid, William.....	Fort Edward.....	5
	Reid, William J.....	Argyle.....	5
	Rich, Harvey.....	Shushan.....	18
	Roberson, Albert H.....	Shushan.....	8
	Rogers, Alfred A.....	Salem.....	15
	Sheehan, M. W.....	Hudson Falls.....	25
	Shields, J. M.....	Smiths Basin.....	5
	Shields, Robert.....	Hartford, R. D. 1.....	8
	Steele, J. Franklin.....	Shushan.....	18
	Stevenson, Geo.....	Salem.....	9
	Tefft, M. W.....	Greenwich.....	11
	Tilford, Charles H.....	Smiths Basin, R. D. 1.....	9

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Washington.....	Ward, George H.....	Whitehall, R. D. 2.....	26
	Wescott, Frank L.....	Whitehall.....	10
	Williams, A. J.....	Middle Granville.....	1
	Williams, Harold M.....	Ft. Edward.....	9
	Wilson Bros.....	Salem.....	12
	Wilson, Henry R.....	Salem, R. D. 2.....	3
	Wright, Charles A.....	Smiths Basin.....	7
	Wright, Geo. S.....	Cambridge.....	13
	Yarter, C. M.....	Hudson Falls.....	35
Wayne.....	Blaker, Carl C.....	Macedon Center.....	3
	Brand, Robert.....	Clyde.....	3
	Coveney, Robert.....	Walworth.....	55
	DuRight, Albert A.....	Marion.....	5
	Eddy, J. C.....	Williamson.....	15
	Foote, Avery L.....	Newark, R. D. 2.....	11
	Hazen, L. J.....	Lyons.....	16
	Kelsey, Edgar S.....	Clyde.....	4
	Lembke, Fred W.....	Lyons.....	40
	Livingston, John P.....	Clyde.....	6
	MacArthur, S. T.....	Red Creek.....	1
	Miller, E. R.....	Wolcott.....	6
	Perkins, H., & Son.....	Red Creek.....	52
	Phelps, F. M.....	Newark.....	*13
	Phillips, Meric.....	Red Creek.....	13
	Reed, Haynes.....	Savannah.....	13
	Reeves, Harriet C.....	East Palmyra.....	15
	Rice, Judson E.....	Sodus.....	1
	Sweezey, L. J.....	Marion.....	20
	Tyler, Howard L.....	South Butler.....	1
	Vanderbilt, Ronaldo.....	Lyons.....	1
	Wadsworth, D. E.....	Wolcott.....	9
	Walton, John H.....	Palmyra.....	28
	Washburn, E. H., & Son....	Wolcott.....	32
	Watson, H. C., & Son.....	Clyde.....	16
	Wilder, Ralph E.....	Newark.....	12
	Wykle, Alexander H.....	Clyde.....	22
Westchester.....	Baker, Chas. H..... (Mohegan Farm)	Mohegan Lake.....	100
	Barrett, H. G.....	Granite Springs.....	1
	Cloverly Farms.....	Bedford.....	7
	Holter, Edwin O.....	Mt. Kisco.....	3
	Irish, David J.....	Yorktown Heights.....	9
	Lincoln Agricultural School.	Lincolndale.....	27
	Mohegan Farm. (See Baker, Chas. H.)		
	New York State Training School.....	Yorktown Heights.....	*17
	Springsteel, G. J.....	Elmsford.....	14
	Starbuck, C. A.....	Croton-on-Hudson.....	3

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Wyoming.....	Armstrong, Fred.....	Arcade.....	2
	Arnold, G. N.....	Bliss.....	5
	Buck, Walter M.....	Warsaw.....	33
	Cook, Frank M.....	Warsaw.....	*8
	Cooley, C. D.....	Portageville.....	5
	Devlin, Chas. J.....	Arcade.....	4
	French, Myron.....	Bliss.....	2
	Gay, C. T.....	Attica.....	68
	Glor, Elon G.....	Attica.....	10
	Griffith, Alonzo E.....	Gainesville.....	3
	Gunn, Joseph T.....	Arcade.....	4
	Hain, C. H.....	Warsaw.....	*7
	Husted, F. S.....	Bliss, R. D. 2.....	*10
	Kahl, Henry.....	Warsaw, R. D. 5.....	10
	Kehl, F. W.....	Strykersville.....	9
	Klein, Wm. A.....	Johnsonburg.....	10
	Lucas & Dunbleter Bros....	Gainesville.....	9
	McCormick, Maurice.....	Java Center.....	1
	McCutcheon, James S., & Son.....	Arcade.....	1
	Robinson & McLaughlin...	Bliss.....	8
	Parker, G. H.....	Varysburg.....	1
	Ramsey, Howard W.....	Bliss.....	2
	Schmelzle, John H.....	Cowlesville.....	8
	Sheldon, A. H.....	Perry.....	9
	Smith, L. A.....	Portageville.....	7
	Spink, Elon P., & Son.....	Attica.....	62
	Stamp, C. F.....	Silver Spring.....	2
	Streeter & Cross.....	Pike.....	24
	Tozier, Wm. S.....	Varysburg.....	6
	Tuttle, W. H.....	Perry.....	1
	Van Gorder, G. S. & E. E..	Pike.....	21
	Welker, A. J.....	Attica.....	55
	Welles, E. T.....	Arcade.....	18
	Wilder, Joseph.....	Warsaw.....	26
Yates.....	Ardrey, George.....	Dundee.....	1
	Damoth, N. A.....	Penn Yan.....	*6
	Gridley, Warren E., & Sons	Bluff Point.....	10
	Harpending, H. C. & H. B..	Dundee.....	4
	Hawther Farms Co.....	Rock Stream.....	100
	Low, H.....	Rock Stream.....	8
	Palmer Institute—Starkey Seminary.....	Lakemont.....	*10
	Spencer, William H.....	Rock Stream.....	6
	Walton, G. B.....	Dundee.....	5
	Wayand, Leon.....	Penn Yan.....	10

* Including pure-breds not registered.

JERSEY

County in which stock is located	Owner	Address	Number of animals
Albany.....	Blaisdell, R. Van B.....	Coeymans.....	17
	Bogardus, John C.....	Knox.....	15
	Delehanty, Raymond M...	Voorheesville, R. D.....	*4
	Green, Lindsey.....	Indian Fields.....	*13
	Henion, Mrs. Eugenia F...	Altamont.....	2
	Hilton, P.....	Altamont.....	19
	Koons, Abram C.....	Coeymans Hollow.....	15
	State Department of Agri- culture.....	Albany.....	8
	Ward, Walter E.....	78 Chapel St., Albany.....	30
	Wilsey, C. E.....	Selkirk.....	*1
Allegany.....	Alfred University.....	Alfred.....	15
	Bentley, E. A.....	Wellsville.....	14
	Bentley, Eva E.....	Wellsville.....	2
	Clark, S. Hoxie.....	Belvidere.....	140
	Cotton, J. C.....	Almond.....	13
	Crocker Bros.....	Rushford.....	3
	Foose, Isaac N.....	Belvidere.....	4
	Horner, Joseph H.....	Angelica.....	2
	Sherman, H. P.....	Alfred Station.....	1
	Townsend, Stanton.....	Friendship.....	*1
Broome.....	Doolittle, J. A.....	Harpursville.....	9
	Drumm, Ervin E.....	Johnson City.....	*6
	Green, Mrs. Sarah.....	Binghamton.....	1
	Hillcrest Farms.....	Binghamton.....	7
	Horton, E. E.....	Johnson City.....	24
	Mattice, Frank.....	Binghamton.....	1
	Spafard, Elmer S.....	Conklin.....	*5
Cattaraugus.....	Dusenbury, E. G.....	Portville.....	47
	Phillips, Clayton M.....	Cattaraugus.....	8
	Merrill, Irving.....	South Dayton.....	1
Cayuga.....	Avery, James.....	Aurora.....	1
	Chase, C. G.....	King Ferry.....	*26
	The Dean Farms, Inc.....	Auburn.....	*1
	Delano, F. S.....	Union Springs.....	14
	Ferris, Geo. L.....	Atwater.....	14
	Goodrich, A. H.....	Auburn, R. D. 3.....	16
	Lee, Ashel D.....	Moravia.....	*5
	Mosher, E. W.....	Aurora.....	65
	Osborne, Charles D.....	Auburn.....	16
	Perry, F. D.....	Moravia.....	32
	Tryon, Howard.....	Auburn, R. D. 1.....	*11
	Young, E. J., & Sons.....	Mapleton.....	12
Chautauqua.....	Ayres, H. W.....	Jamestown.....	63
	Case, H. B.....	Dewittville.....	1
	Cowan, C. C.....	Conewango Valley.....	4

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Chautauqua.....	Cowden, L. D.....	Fredonia.....	24
	Cross, O. E.....	Niobe.....	7
	Fargo, G. R.....	Ashville.....	*10
	Fessenden, N. J.....	Dewittville.....	6
	Griswold, Myron D.....	Cassadaga.....	6
	Harrington, W. P.....	Falconer, R. D. 71.....	8
	Maxson, Lee.....	Forestville.....	5
	Meade, W. P., & Son.....	Jamestown, R. D. 77.....	14
	Pierce & Son.....	Stockton.....	9
	Raymond, I. R.....	Cassadaga.....	*50
	Wade, Bert D.....	Conewango Valley.....	34
	Walldorf, Henry, & Son.....	Dunkirk.....	4
	Webster, Chas.....	Dewittville.....	5
Chenango.....	Calvert, E. M.....	Georgetown.....	1
	Chase, Lynn.....	New Berlin.....	2
	Davis, Geo. W.....	South Otselic.....	*8
	Edgerton, Paul M.....	New Berlin.....	23
	Gates, Henry L.....	Pharsalia.....	4
	Goodnough, George A.....	Afton.....	*5
	Greene, Clifford E.....	Greene.....	30
	Hard, F. A. & Eva.....	Afton.....	4
	Hayden, Wm.....	McDonough.....	12
	Hayden, William, & Son.....	McDonough.....	38
	Lee Brothers.....	South Otselic.....	4
	Merriam, Albert B.....	McDonough.....	6
	Neal, C. M. & F. M.....	North Pitcher.....	7
	Rowlison, Harry A.....	McDonough.....	10
Clinton.....	AuSable Valley Farm.....	Keeseville.....	4
	Billings, Florence E..... (Clovercrest Farm)	Valcour.....	57
	Clovercrest Farm. (See Bil- lings, Florence E.)		
	Jarvis, Fred.....	Peru.....	1
	Jones, C. H.....	Chazy.....	9
	Sheldon, I. L.....	Ellenburg Depot.....	*15
Columbia.....	Hosford, J. Spencer.....	Kinderhook.....	48
	Lampman, Frank.....	Ancram Lead Mines.....	*5
Cortland.....	Knapp, O. Arthur.....	Cortland.....	3
	McLaughlin, Carl D.....	Cincinnatus, R. D. 2.....	5
	Perry Bros.....	Homer.....	22
	Roselawn Pony Stud. (See Weaver, A. M.)		
	Weaver, A. M..... (Roselawn Pony Stud)	Cortland.....	1
Delaware.....	Adams, John.....	Hamden.....	14
	Archibald, J. S.....	Margaretville.....	2
	Archibald, T. A.....	Bovina.....	2

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Delaware.....	Ayer & McKinney.....	Meridale.....	550
	Barlow, J. Q.....	Beerston.....	5
	Briggs, H. E.....	Franklin.....	*39
	Calhoun, David.....	Hobart.....	6
	Coe, Vernon.....	Hamden.....	3
	Davis, F. E.....	Delhi.....	2
	Fisher, Homer.....	North Franklin.....	*4
	Garrison, Jas. W.....	Fleischmanns.....	8
	Gerry, Louisa M.....	Delhi.....	5
	Govern, M. A.....	Stamford.....	15
	Harper, H. W.....	North Kortright.....	38
	Howland, Owen L.....	Walton.....	*32
	Lawrence, Ira D.....	Kelly Corners.....	9
	Leal, Ernest A.....	Delhi.....	8
	MacFarlan, R. B.....	Delhi.....	19
	McDonald, Samuel.....	Walton, R. D. 1.....	7
	McNaught, Colin M.....	Bovina Center.....	10
	McPherson, C. A.....	Bloomville.....	*10
	Monroe, James.....	Bovina.....	3
	Nelson, L. J.....	West Davenport.....	2
	Nichol, James A.....	Walton, R. D. 1.....	30
	Nicoll, A. J.....	Delhi.....	4
	Niles, C. B.....	Tacoma.....	5
	Pickwick, Chas. D.....	Delhi.....	6
	Rensma, Jos. G.....	Walton, R. D. 2.....	1
	Rich, George Thomas.....	Hobart.....	20
	Sanford, Geo. W., & Son....	Margaretville.....	24
	Smith, Leonard.....	Bloomville.....	90
	Thomson, Wm. S.....	Bovina Center.....	*10
	Truscott, Edgar B.....	Delhi.....	25
	Tweedie, A. B.....	Walton.....	30
	Ward, William F.....	Walton.....	10
	Wilson, Van E.....	Delhi.....	27
Dutchess.....	Allen, Anna E.....	Clinton Corners.....	20
	Briarcliff Farms, Inc.....	Pine Plains.....	39
	Crosby, Maunsell S.....	Rhinebeck.....	3
	Edgewood Farm.....	Rhinebeck.....	5
	Huntington, R. P.....	Staatsburg.....	20
	Morgenthau, Henry, jr.....	Hopewell Junction.....	1
	Robinson, D. R.....	Fishkill Plains.....	*19
	Skidmore, Herbert J.....	Pleasant Valley.....	1
	Widmer, Oscar R.....	Wappingers Falls.....	1
Erie.....	Clark, E. B.....	Elma.....	2
	Clark, M. H. & M. A.....	Elma.....	16
	Craven, John.....	Wales Center.....	1
	Machmer, Geo.....	Eden.....	*16
	Walker, Ernest B.....	Williamsville.....	.6

* Including pure-breeds not registered.

FIG. 24—A GROUP OF JERSEYS.
(Courtesy of American Jersey Cattle Club)

County in which stock is located	Owner	Address	Number of animals
Essex.....	Lake Placid Co.....	Lake Placid Club.....	50
	Sherman, G. D.....	Port Henry.....	6
Genesee.....	Acker, A. F.....	East Bethany.....	15
	Avery, G. N.....	Pavilion.....	*8
	Pinney, Frank H.....	Stafford.....	7
	Plue, C. D.....	Basom.....	1
	Stevens, D. R.....	Bergen.....	5
	Borthwick, J. F., & Son.....	Freehold.....	15
Greene.....	Chatfield, Chas. H.....	Prattsville.....	7
	Healey, J. F..... (Sunside Farm)	Sunside.....	8
	Ingalls, Henry R.....	Greenville.....	13
	Jennings, Clarence H.....	Freehold.....	6
	Kirk, V. R.....	Westkill.....	2
	Lampman, John P.....	Greenville.....	5
	Lampman, Lewis.....	Coxsackie.....	65
	Palmer, Oliver.....	Catakill.....	8
	Parks, Elisha N.....	Cornwallville.....	6
	Perry, Wm. J.....	West Coxsackie.....	*21
	Saxe, W. H.....	Palenville.....	22
	Scofield, L. W.....	Freehold.....	11
	Story, Clinton M.....	Freehold.....	3
	Story, Ralph T.....	Freehold.....	23
	Sunside Farm (See Healey, J. F.)		
	Sutton, O. C.....	Cornwallville.....	11
	White, Henry E.....	Coxsackie.....	9
Herkimer.....	Avery, Frank.....	Ilion.....	7
Jefferson.....	Bull, R. K.....	Watertown, R. D. 2.....	*13
	Bull, Wilbur C.....	Watertown.....	25
	Cleveland, S. R.....	Watertown.....	60
	Collins, F. M.....	Mannsville.....	1
	Lasher, Frank C.....	Watertown, R. D. 1.....	30
	Servey, Lee W.....	Watertown.....	5
Livingston.....	Craig Colony.....	Mt. Morris.....	3
	Hunt, C. I., & Son.....	Hunt.....	17
	Mitchell, John E.....	Hunt.....	14
	Osgoodby, M. H.....	Nunda.....	*4
Madison.....	Button, R. D.....	Canastota.....	12
	State School of Agriculture..	Morrisville.....	10
	Stillman, Fred F.....	Brookfield.....	1
Monroe.....	Brainard, H. C.....	Chili Station.....	8
	Brooks, C. G.....	Pittsford.....	*6
	Buell, Ely.....	Irondequoit.....	5
	Bush, Seth J. T.....	Morton.....	5
	Davis, I. L.....	Chili Station.....	*4
	Harroun, F. M.....	Spencerport.....	1

* Including pure-breds not registered.

CATTLE — JERSEY

441

County in which stock is located	Owner	Address	Number of animals
Monroe.....	Hollister, Granger A.....	Rochester.....	*1
	Meadowbrook Farm (See Peer, Geo. E.)		
	McGuire & Wood.....	Pittsford.....	*42
	Peer, Geo. E.....	Chili Station.....	20
	(Meadowbrook Farm)		
	Wood, O. B.....	Spencerport.....	1
Montgomery.....	Burnap, E. B.....	Canajoharie.....	3
	Herrick, N. J.....	Canajoharie.....	*35
Nassau.....	Davis, Albert J.....	Jericho.....	1
	Hudson, C. I.....	East Norwich.....	75
	(Knollwood Farm)		
	Kaintuck Farm.....	Mill Neck.....	1
	Knollwood Farm. (See Hud- son, C. I.)		
	Pratt Estate, Chas.....	Glen Cove.....	76
	Robbins, Francis L., jr.....	Woodbury.....	25
	Whitney, Payne.....	Manhasset.....	29
New York.....	Velasco & Co.....	New York.....	29
Niagara.....	Britt, Frank.....	Middleport.....	4
	Crosby, E. E.....	Lockport.....	*19
	Folger Fruit Farms, Inc.....	Olcott.....	1
	Nicholl, C. L. & H. M.....	Lockport.....	*10
	Ouchie, E. P.....	Martinsville.....	4
Oneida.....	Bowen, John.....	Barneveld.....	*40
	Brown, Arthur T.....	Clayville.....	1
	Chapman, W. I.....	Sauquoit.....	*16
	Fenton, Geo.....	Utica.....	4
	Fitch, A. L.....	Westmoreland.....	11
	Goodson, W. T.....	Deansboro.....	1
	Jones, F. J.....	Sauquoit.....	40
	Kenotin Farm.....	Washington Mills.....	3
	Midlam, R. W.....	Rome.....	6
	Perry & Dillman.....	Durhamville.....	2
	Reader, Chas.....	Clinton.....	41
	Southworth, F. J.....	Bridgewater.....	2
	Van Swall, George H.....	Oriskany Falls.....	8
	Vary, N. A. & Son.....	Ava.....	1
	Veitch, John R.....	Barneveld.....	*5
	Weaver, G. C.....	Clinton, R. D. 2.....	31
Onondaga.....	Allen, T. See Smith, H. C.		
	Gregory, J. M.....	Skaneateles.....	6
	Laird, C. W., & Son.....	Memphis.....	7
	Larkins, William.....	Skaneateles.....	5
	Smith, H. C., & Allen T.,....	1548 E. Genesee St., Syracuse	43
	Tucker, John.....	Skaneateles.....	16
	Tucker, Wm. B.....	Marcellus.....	2
	Wells, Emmett.....	Tully.....	*9

* Including pure-breeds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Ontario.....	Ingraham, F. B.....	Naples.....	16
	Long, Frances H. C.....	Naples.....	7
	N. Y. Agricultural Experi- ment Station.....	Geneva.....	26
	Rhine, Duncan.....	Canandaigua.....	*3
	Tiffany, Burton.....	Bristol Center.....	4
	Tozer, H. H.....	Naples.....	9
	Tozer, John H.....	Naples.....	2
	Wallace, Fred C.....	Canandaigua.....	4
	Wheaton, W. E.....	Naples.....	5
	Witter, Wm. H.....	Stanley.....	*10
Orange.....	Clemson, Geo. N.....	Middletown.....	2
	De Vine, Dr. J. F.....	Goshen.....	8
	Kattmann, Frederick A....	Montgomery.....	1
	Norris, Fred A.....	Fair Oaks.....	6
	Todd, J. H. L.....	Bellvale.....	6
	(Victor Farms)		
	Victor Farms (See Todd, J. H. L.)		
Orleans.....	Wood, Wm. R.....	Newburgh.....	65
	Brace, B. W.....	Albion.....	17
	La Mont, Geo. B.....	Albion.....	1
	Pratt, J. Stanley.....	Knowlesville.....	3
Oswego.....	Abell, F. L.....	Phoenix.....	*2
	Kingsbury, C. I.....	Mexico.....	18
	Owen, Ralph E.....	Fulton.....	*3
	Rowlee, Chas. W.....	Fulton.....	*13
	Winsor, Wm. H.....	Altmar, R. D. 4.....	1
	Young, D. F.....	Phoenix.....	40
Otsego.....	Ainslie, Wm. C.....	Hartwick.....	4
	Brown, W. L.....	Oneonta.....	15
	Bunn, C. A.....	Mount Vision.....	1
	Burnell, George T.....	Cooperstown.....	1
	Burton, S. J., & Son.....	Worcester.....	3
	Cranston, John O.....	Laurens.....	1
	Gregory, D. M.....	Mt. Vision.....	6
	Harrington, C. K.....	Mount Vision, R. D. 2.....	4
	Harrison, C. G.....	Milford.....	8
	Harrison, Lyman D.....	Mount Vision.....	6
	Hillis, A. W.....	South Worcester.....	6
	Hubbard, R. F.....	Elk Creek.....	5
	Ingalsbe, Frank.....	South Hartwick.....	24
	Maine, C. D.....	West Edmeston.....	1
	Marlette, H. H.....	Mount Vision.....	23
	Perry, Arthur.....	West Oneonta.....	10
	Riddell, M. H.....	Cooperstown Junction.....	3
	Rockwell, A. C.....	Garrattsville.....	*22

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Otsego.....	Rockwell, Stuart C.....	Garrattsville.....	3
	Shove, M.....	Milford.....	1
	Straight, A. H.....	Mount Vision.....	1
	Swift, Robert E.....	Cherry Valley.....	6
	Tuller, Lucinda.....	Mount Vision.....	2
	Wallace, Henry.....	Morris.....	*9
	Wardwell, Henry L.....	Springfield Center.....	40
	Wilson, James.....	Schenevus.....	*10
Putnam.....	Frazier, Isabel, Miss.....	Garrison.....	2
Rensselaer.....	Bootmann, J. D.....	Petersburgh.....	7
	Edgewood Farm (See Snow, J. F.)		
	Hunter, J. H.....	Valley Falls.....	10
	Kimmev, F. B.....	East Greenbush.....	4
	Snow, J. F..... (Edgewood Farm)	West Stephentown.....	10
Rockland.....	Headden, John C.....	Spring Valley.....	11
	Laing, James.....	West Nyack.....	5
	Lawrence, Margaret.....	Palisades.....	1
	Martens, P.....	Pearl River.....	2
St. Lawrence.....	Allison's Island Farm and J. W. Allison.....		*35
	Armstrong, W. E. & W. H..	Lisbon, R. D. 2.....	11
	Cota, M. P.....	Canton.....	12
	Howard, C. G.....	Crary Mills.....	3
	Howe, H. W.....	Madrid Springs.....	24
	Lamson, A., & Son.....	Canton.....	9
	MacFadden, J. A.....	Lisbon.....	13
	Marshall, J. T.....	Lisbon.....	2
	Radway, R. H.....	Canton.....	4
	Robson, Alex.....	Lisbon.....	1
	Robson, Wm.....	Lisbon.....	28
	Smithers, F. B., & Son.....	Heuvelton.....	7
	Stone, C. A.....	Canton.....	18
	Worthing, R. B.....	Norwood.....	14
Saratoga.....	Clews & Shurter.....	Gansevoort.....	12
Schenectady.....	Ennis, J. A.....	Pattersonville.....	1
	Hanson, W. T.....	Schenectady.....	8
Schoharie.....	Babcock, Elias.....	Schoharie, R. D. 2.....	17
	Hinman, F. C.....	Gallupville.....	1
	Karker, A. J.....	Cobleskill.....	17
	Mix, F. G. & Wm. P.....	Schoharie.....	27
	Snyder, Ward L.....	Cobleskill.....	2
Schuyler.....	Terybery, Peter.....	Hector.....	4
	Terybery, Thomas.....	Hector.....	1

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Seneca.....	Kinne, H. M.....	Romulus.....	20
	Leake, E. T.....	Romulus.....	8
	Osgood, T. C.....	Trumansburg.....	31
	Smalley, Burt E.....	Interlaken.....	12
	Ward, E. F.....	Trumansburg.....	2
Steuben.....	Bailey, Leslie.....	Bath.....	4
	Fox, Wiley.....	Avoca.....	*4
	Jones, M. S.....	Danville, Ill.	
	(See Wheeler Homestead, Kanona)		
	Rees, E. S.....	Hammondsport.....	2
	Sherman, Frank L.....	Bath.....	6
	Simpson, A. E.....	Jasper.....	7
	Stewart, S. Dewitt.....	Kanona.....	5
	Wheeler Homestead.....	Kanona.....	3
Suffolk.....	Brown, Lathrop.....	Saint James.....	4
	Cedars, The (See Strong, Selah B.)		
	Fleet, John P., Est.....	Huntington.....	1
	Gould Bros.....	East Hampton.....	60
	Hand, J. Howard.....	Wainscott.....	3
	Hedges, S. C.....	East Hampton.....	10
	Howard, M. H.....	Cutchogue.....	28
	Jennings, Walter.....	Cold Spring Harbor.....	20
	Oxnard, J. G.....	St. James.....	4
	Peters, Samuel T.....	Islip.....	31
	Randall, F. B.....	Mount Sinai.....	25
	Robbins, Harry Pelham....	Southampton.....	1
	Strong, Selah B.,.....	Setauket.....	5
	(The Cedars)		
	Tuthill, F. H., & Son.....	Rocky Point.....	4
	Williams, Amos.....	Lake Grove.....	15
	Wilson, J. V.....	Jamesport.....	14
Sullivan.....	Dreher, Henry.....	Roscoe.....	1
	Kastner, Alfred.....	Callicoon Center.....	1
	Kraut, Herman.....	Jeffersonville.....	1
	Proctor, Wm. Ross.....	Barryville.....	73
	Stratton, Leon P.....	Monticello.....	6
Tioga.....	Barrott, A. F.....	Newark Valley.....	2
	Hooker, Fred B.....	Newark Valley.....	1
	McLeese, J. C.....	Candor.....	3
	Overlander, A. J.....	Owego.....	1
	Winters, Byram L.....	Smithboro.....	6
Tompkins.....	Baker, Andrew.....	Freeville, R. D. 16.....	10
	Beckwith, L. L.....	Ludlowville.....	*17
	Brown, E. O.....	Ithaca, R. D. 2.....	1
	Cook, James C.....	Caroline Depot.....	9
	Cornell University.....	Ithaca.....	18

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Tioga.....	Earsley, M. G.....	Ithaca.....	1
	Gardner & Goddard.....	Ithaca, R. D. 2.....	4
	Genung, Dr. H.....	Freeville.....	18
	George, Esther B.....	Freeville.....	3
	Green, Frank H.....	Groton.....	3
	Hollister, R. H.....	Slaterville Springs.....	8
	Howe, Percy R.....	Groton.....	3
	Kinne, Wisner.....	Trumansburg.....	*3
	Lathrop, J. A.....	Freeville.....	6
	Logge, C. C.....	Ithaca, R. D. 6.....	1
	McLallen, Henry C.....	Trumansburg.....	3
	Macomber, Irvin J.....	Ithaca, R. D. 4.....	2
	Mekeel, W. & I.....	Jacksonville.....	49
	Pearson, Raymond A.....	Ithaca, R. D. 3.....	8
	Speed, Robert L.....	Slaterville Springs.....	5
	Updike, Fred.....	Trumansburg.....	2
	Wattles, B. B.....	Brookton.....	14
	Willis, Morris S.....	South Lansing.....	*5
	Wixom, Frank.....	Trumansburg.....	6
	Wright, Arthur D.....	Slaterville Springs.....	*2
Ulster.....	Forster, Hermann.....	West Hurley.....	3
	Gould, Jay.....	Hardenburg.....	1
	Roberts, G. Van B.....	Highland.....	75
	Schoonmaker, Egbert.....	High Falls.....	*4
	Yama Farms.....	Napanoch.....	45
Warren.....	Kendrick, S. D.....	Glens Falls.....	18
	(Kenkroft Farm)		
	Kenkroft Farm (See Kendrick, S. D.)		
	Loomis, J. R., jr.....	Glens Falls.....	8
Washington.....	Barden, H. E.....	Granville.....	2
	Campbell, S. G.....	Salem.....	5
	Ely, Jay.....	Granville, R. D. 2.....	*4
	Fleming, William, jr.....	Granville.....	70
	Getty, Harold E.....	Granville.....	4
	Getty, John J., & Son.....	Granville, R. D. 2.....	21
	Getty, Walter H.....	Granville, R. D. 2.....	*7
	Getty, William E.....	Granville.....	6
	Gilman, George L.....	Granville.....	1
	Guthrie Bros.....	Greenwich.....	1
	Hogle, Frank.....	South Hartford.....	13
	Huggins, Charles H.....	Smiths Basin.....	25
	McWhorter, William.....	Argyle.....	23
	Petteys, John S.....	Greenwich.....	5
	Richards, A. K.....	Cossayuna.....	6
	Robertson, J. H.....	Greenwich.....	*14
	Sheehan, M. W.....	Hudson Falls.....	7
	Welch, Henry.....	Granville.....	67
	Wilbur, Clark.....	Granville.....	17

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Wayne.....	Buell, Fred G., Estate.....	Clyde.....	4
	Frowley, George J.....	Walworth.....	4
	Lapham, George P.....	Macedon.....	7
	Mitchell, Albert A.....	Palmyra.....	11
	Morris, Robert.....	Lincoln.....	*11
	Shourds, D. S.....	Macedon.....	11
Westchester.....	Addicks, W. R..... (Valley Ridge Farm)	Mt. Kisco.....	13
	Agnew, G. B.....	Lake Waccabuc.....	7
	Butterfield, Mrs. O. E.....	Croton Lake.....	3
	Darlington, C. F.....	Mt. Kisco.....	25
	Harris, S. G.....	Tarrytown.....	3
	Holter, Edwin O.....	Mt. Kisco.....	5
	Newstadt, Mrs. S.....	Chappaqua.....	27
	Robinson, George B.....	Bedford Hills.....	9
	Shelton, George G..... (Farm at Lewisboro, N. Y.)	Ridgefield, Conn.....	7
	Valley Ridge Farm. (See Ad- dicks, W. R.).		
Wyoming.....	Avery, H. W.....	Warsaw.....	9
	Buckhout, Frank.....	Wyoming.....	11
	Cooper, E. D.....	Java Village.....	4
	Cummings, Frank.....	Gainesville.....	7
	Daidsen, J. M.....	Portageville.....	5
	Duggan, Loren S.....	Gainesville.....	6
	Ewell, O. C.....	Wyoming.....	1
	Halstead, W. J.....	Warsaw.....	5
	Howes, H. R., & Son.....	Wyoming.....	4
	Keeney, F. B.....	Warsaw.....	51
	Morris, Edward H.....	Warsaw.....	21
	Nevins, M. J.....	Perry.....	4
	Nichols, A. E., & Sons.....	Java.....	7
	Oliver, P. A.....	Perry.....	14
	Rowe, Elmer E.....	Warsaw.....	43
	Sherman, A. K.....	Java Village.....	1
	Smallwood, Clarence A.....	Warsaw.....	13
	Strivings, S. L.....	Castile.....	2
	Swyers, Mrs. C.....	Castile.....	3
Yates.....	Brown, Charles H.....	Dundee, R. D. 19.....	1
	Damoth, N. A.....	Penn Yan.....	1
	Morris, William T.....	Penn Yan.....	23

Polled Jersey

Delaware.....	Dicks, Nicholas.....	Walton.....	9
Otsego.....	Brimmer, A. G.....	Mt. Vision.....	10
	Hillis, A. W.....	South Worcester.....	7

* Including pure-breds not registered.

RED POLLED

County in which stock is located	Owner	Address	Number of animals
Cayuga.....	Avery, Horace W.....	King Ferry.....	17
	Morse, James S.....	Levanna.....	1
Chautauqua.....	Lewis, F. S.....	Ashville.....	10
	Peterson, C. E.....	Jamestown.....	9
	Reed, Mrs. Harvey, & Sister	Cherry Creek.....	16
Monroe.....	Adams, E. J.....	Spencerport.....	1
Nassau.....	Ellis, Ralph.....	Jericho.....	1
Rensselaer.....	Abbott, I. Lester.....	Johnsonville.....	4
St. Lawrence.....	Hamilton, E. C.....	Gouverneur.....	10
Tompkins.....	Sears, Jesse D.....	Ithaca, R. D. 3.....	16
	Williams, G. O.....	Ithaca, R. D. 5.....	14

SHORTHORN

Allegany.....	Boyd, T. N.....	Andover.....	32
Cayuga.....	Stoyell, H. Arthur.....	Locke.....	2
Chautauqua.....	Ayres, H. W.....	Jamestown.....	5
	Boak, John W.....	Jamestown.....	6
	Gleason, Ernest.....	Moons.....	*12
	Lewis, B. W.....	Ashville.....	1
	Lewis, F. S.....	Ashville.....	20
	Mead, Henry D.....	Jamestown, R. D. 77.....	1
	Near Bros.....	Jamestown.....	2
	Taylor, L. H.....	Kennedy.....	12
Chemung.....	Sage, Fenton L.....	Seeley Creek.....	10
Clinton.....	Heart's Delight Farm.....	Chazy.....	111
	Miner W. H. (See Heart's Delight Farm)		
Dutchess.....	Haight, Henry J.....	Dover Plains.....	*16
Genesee.....	Barr, James.....	Bergen.....	9
	Beadle, Walter D., & Son..	LeRoy.....	12
	Chappell, P. M.....	220 Warwick Ave., Roch- ester.....	22
Greene.....	Sutton, William E.....	Windham.....	35
Herkimer.....	Hansel, F. L.....	E. Winfield.....	3
Livingston.....	McKenzie, Duncan.....	Linwood.....	*1
	Trewer, T. S.....	Mt. Morris.....	7
Monroe.....	Beedle, J. E.....	Brockport.....	16
	Kendall, Emerson.....	Churchville.....	15
	Wickins, Walter H.....	Chili Station.....	3
New York.....	Velasco & Co.....	New York.....	15
Orange.....	Tener, H. E.....	Washingtonville.....	65
Orleans.....	Canham, James.....	Kent.....	8
Otsego.....	Dutton, Charles R.....	Cooperstown.....	16
	Griggs, James A., & Son...	Springfield Center.....	11
	House, Herman.....	Richfield Springs, R. D. 3...	6

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Otsego.....	King, Philip.....	Richfield Springs.....	1
	Van Buskirk, E. H.....	Milford.....	2
Rensselaer.....	Cottrell, Case.....	Hoosick Falls.....	1
St. Lawrence.....	Chittenden, L. A.....	Hopkinton.....	3
Schoharie.....	Osterhout, D. H., & Son...	Lawyersville.....	20
Schuyler.....	Hall, Miller, Estate.....	Alpine.....	10
Steuben.....	Gibbs, D. Z.....	Bath, R. D. 3..	2
	Robie, H. M.....	Savona.....	10
	Van Slyke, A.....	Bath.....	9
	Whiteman, J. C.....	Jasper.....	8
Suffolk.....	Aldrich, Gilbert E.....	Mattituck.....	5
Tompkins.....	Cornell University.....	Ithaca.....	11
	Lormor, James E.....	Dryden.....	2
	Osmun, C. H.....	Groton.....	23
	Scott, W. S.....	Taughannock Falls.....	6
Ulster.....	Vredenburg, Shaffer.....	Bearsville.....	1
Warren.....	Loomis, J. R., jr.....	Glens Falls.....	1
Washington.....	Steenon, Robert A., Estate	Greenwich.....	16
Wayne.....	Norris, E. B., & Son.....	Sodus.....	13
	Stearns, Geo. T., & Son....	Palmira.....	22
Wyoming.....	Coxe, Huron A.....	Wyoming.....	27
Yates.....	Beyea, Vern.....	Dundee.....	4

Dairy Shorthorn

Chautauqua.....	Gleason, Ernest.....	Moons.....	10
Clinton.....	Bateman, H. S.....	Champlain.....	8
Essex.....	Trimble, C. K.....	Crown Point.....	1
Franklin.....	Dwyer & Sons.....	North Bangor.....	32
Livingston.....	Beckwith, A. A.....	Lima.....	4
	Kidd, David C.....	Dansville.....	7
Oneida.....	Dodge, B. J.....	Verona.....	2
	Hill, Charles B.....	Montgomery.....	10
Rensselaer.....	Cottrell, Case.....	Hoosick Falls.....	1
St. Lawrence.....	Fisher, J. C., & Son.....	Madrid.....	18
Seneca.....	Easterbrook, Edwin.....	Ovid, R. D. 2.....	21
Yates.....	Blodgett, George.....	Rushville.....	6
	Chadwick, T. M.....	Lakemont.....	5

Polled Durham

Chautauqua.....	Lewis, F. S.....	Ashville.....	12
Livingston.....	Sinclair, D. J.....	Caledonia.....	6
Schuyler.....	Hall, Miller, Estate.....	Alpine.....	10

FIG. 25.--SHORTHORN BULL.
(Courtesy of W. H. Miner, Heart's Delight Farm, Chazy, N. Y.)

SHEEP

[451]

SHEEP

NATIONAL ASSOCIATIONS

Cheviot

American Cheviot Sheep Society

F. E. Dawley, secretary-treasurer, Fayetteville, N. Y.

Cotswold

American Cotswold Registry Association

F. W. Harding, secretary-treasurer, Waukesha, Wis.

Dorset

The Continental Dorset Club

Miss Edith Chidester, secretary, Mechanicsburg, O.

Hampshire-Down

American Hampshire Sheep Association

Comfort A. Tyler, secretary, Coldwater, Mich.

Leicester

American Leicester Breeders' Association,

A. J. Temple, secretary, Cameron, Ill.

Lincoln

National Lincoln Sheep Breeders' Association

Bert Smith, secretary-treasurer, Charlotte, Mich.

Merino, American

Vermont, New York, and Ohio Merino Sheep Breeders' Association

Wesley Bishop, secretary, Delaware, O.

Merino, Delaine

American and Delaine-Merino Record Association

S. M. Cleaver, secretary, Delaware, O.

Merino, Rambouillet

American Rambouillet Sheep Breeders' Association

Dwight Lincoln, secretary, Marysville, O.

Oxford-Down

American Oxford-Down Record Association

W. A. Shafor, secretary, Hamilton, O.

Shropshire

American Shropshire Registry Association

J. M. Wade, secretary-treasurer, LaFayette, Ind.

Southdown

American Southdown Breeders' Association

Frank S. Springer, secretary, Springfield, Ill.

Tunis

American Tunis Sheep Breeders' Association

Raymond H. Hays, secretary, Bainbridge, Ind.

GOATS

Angora

American Angora Goat Breeders' Association

R. C. Johnston, secretary, Kansas City, Mo.

Milch

American Milch Goat Record Association

J. C. Darst, secretary, Dayton, O.

STATE AND COUNTY ASSOCIATIONS

Delaware County Sheep Growers' Association

John Q. Barlow, secretary, Beerston, N. Y.

Essex County Sheep Breeders' Association

E. W. Stafford, secretary, Willsboro, N. Y.

Otsego County Sheep Breeders' Association

Howard Cunningham, secretary-treasurer, Cooperstown, N. Y.

FIG. 28.—BLACK FACED HIGHLAND.
(Courtesy of F. E. Dawley, Fayetteville, N. Y.)



SHEEP

BLACK FACED HIGHLAND

County in which stock is located	Owner	Address	Number of animals
Columbia.....	Powell, Wilson M.....	Old Chatham.....	12
Otsego.....	Hillis, G. M.....	South Worcester.....	5
	Gegory, F. L.....	Mt. Vision.....	50
Rensselaer.....	Edgewood Farm. (See Snow, J. F.)		
	Snow, J. F.....	West Stephentown.....	14
	(Edgewood Farm)		

CHEVIOT

Cayuga.....	Eldridge, C. A.....	Auburn, R. D. 5.....	25
Chautauqua.....	Meade, W. P., & Son.....	Jamestown, R. D. 77.....	7
Columbia.....	Powell, Wilson M.....	Old Chatham.....	11
Delaware.....	Birdsall, Van D.....	East Masonville.....	9
	Harper, H. W.....	North Kortright.....	12
Greene.....	Alden, John.....	Freehold.....	2
Livingston.....	Sage, Elmer F.....	Avon.....	9
Onondaga.....	Dawley, F. E.....	Fayetteville.....	215
Orleans.....	Brace, B. W.....	Albion.....	10
Otsego.....	Ainslie, R. L.....	Hartwick, R. D. 1.....	16
	Ainslie, Wm. C.....	Hartwick.....	13
	Curry, John A.....	Hartwick.....	45
	Glimmerglen Farms. (See Hyde, W. T.)		
	Gregory, D. M.....	Mount Vision.....	19
	Gregory, F. L.....	Mt. Vision.....	40
	Hyde, W. T.....	Cooperstown.....	65
	(Glimmerglen Farms)		
	House, Herman.....	Richfield Springs.....	4
	Lough, G. W.....	Hartwick.....	10
	McLoughlin, Edson.....	Unadilla.....	9
	Marlette, H. H.....	Mount Vision.....	12
	Smith, Mrs. W. I.....	Garrattsville.....	5
Rensselaer.....	Edgewood Farm. (See Snow, J. F.)		
	Snow, J. F.....	West Stephentown.....	9
	(Edgewood Farm)		
St. Lawrence.....	Fisher, J. C., & Son.....	Madrid.....	8
Schuyler.....	Auble, F. W.....	Trumansburg.....	13
	Hathaway, B. L.....	Alpine.....	*75
	Shriner, W.....	Hector.....	7
Seneca.....	Townsend, D. H., & Sons...	Interlaken.....	15

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Steuben.....	Brasted, D. L.....	Hornell, R. D. 4.....	25
	Stewart, S. Dewitt.....	Kanona.....	13
Sullivan.....	Brooks, Frank.....	Grahamsville.....	4

COTSWOLD

Cayuga.....	Whitman, Fred E.....	Moravia.....	10
Chautauqua.....	Lewis, F. S.....	Ashville.....	13
Essex.....	Braisted, Geo. A., & Son...	Westport.....	1
Greene.....	Alden, Clifton.....	Freehold.....	5
Onondaga.....	American Karakul Fur Sheep Co.....	Fayetteville.....	7
Ontario.....	Brizzes, E. T.....	Canandaigua.....	30
Rensselaer.....	Edgewood Farm. (See Snow, J. F.)		
	Snow, J. F..... (Edgewood Farm)	West Stephentown.....	11
Schuyler.....	Auble, F. W.....	Trumansburg.....	7
Seneca.....	Townsend, D. H., & Sons...	Interlaken.....	5
St. Lawrence.....	Hamilton, E. C.....	Gouverneur.....	9

DORSET HORN

Cattaraugus.....	Lafferty, Charles.....	Little Valley.....	11
Cayuga.....	Gildersleeve, Frank P.....	Union Springs.....	39
Clinton.....	Heart's Delight Farm.....	Chazy.....	704
Columbia.....	Carlton, W. G.....	Copake.....	3
	Miner, W. H. (See Heart's Delight Farm)		
Delaware.....	Fitch, Clifford B.....	Walton.....	20
Madison.....	Field, H. T.....	Oneida.....	2
Orange.....	Richards, Eben, jr.....	Oxford Depot.....	40
Orleans.....	Beebe, E. P., & Son.....	Holley.....	37
	Boyle, Wm. H.....	Medina.....	6
	Day, Wilmer J.....	Holley.....	8
	Hill, Herbert C.....	Knowlesville.....	20
Otsego.....	Glimmerglen Farms. (See Hyde, W. T.)		
	Gregory, F. L.....	Mt. Vision.....	20
	Hyde, W. T..... (Glimmerglen Farms)	Cooperstown.....	32
Rensselaer.....	Henrotin, Edward.....	South Berlin.....	11
St. Lawrence.....	Newton, C. W.....	South Colton.....	1
Seneca.....	Townsend, D. H., & Sons...	Interlaken.....	25
Steuben.....	Lamson, H. S.....	Cameron.....	21
Suffolk.....	Aldrich, Gilbert E.....	Mattituck.....	*8
	Brown, Lathrop.....	St. James.....	9
Tioga.....	Smith, Lawrence F.....	Lockwood.....	1

* Including pure-breds not registered.

FIG. 27.—CHEVROT EWES IN A FARM FLOCK.
(Courtesy of F. E. Dawley, Fayetteville, N. Y.)

FIG. 28.—COTSWOLD — CHAMPION AT NEW YORK STATE FAIR.
(Courtesy of F. W. Harding, Waukesha, Wis.)

FIG. 29.—DORSET EWE, OWNED AND RAISED BY HEART'S DELIGHT
FARM, CHAZY, N. Y.

SHEEP — HAMPSHIRE DOWN

461

County in which stock is located	Owner	Address	Number of animals
Tompkins.....	Allen, F. R.....	Ithaca.....	10
	Cornell University.....	Ithaca.....	12
	Hopper, H. A.....	Ithaca.....	5
HAMPSHIRE DOWN			
Albany.....	Applebee, Albert.....	Dormansville.....	3
	De Witt, J. M.....	Potter Hollow.....	1
	Hunt, Elmer J.....	Dormansville.....	1
	Mackey, Ivan O.....	Preston Hollow.....	40
Allegany.....	Flint, J. W.....	Scio.....	55
	(Sunny Slope Farm)		
	Merry, Wm.....	Belmont.....	*52
	Palmer, A. E.....	Belmont, R. D. 3.....	1
	Sunny Slope Farm. (See Flint, J. W.)		
	Witter, E. H.....	Cuba.....	3
Broome.....	Gage, Minor.....	Union.....	9
Chautauqua.....	Forbes, Mead.....	Frewsburg.....	3
	Mead, Henry D.....	Jamestown, R. D. 77.....	20
Chenango.....	Collyer, S. H.....	Smithville Flats.....	1
Columbia.....	Colbert, E. J.....	East Chatham.....	18
Essex.....	Porter, Fred L.....	Crown Point.....	6
Franklin.....	Southworth, John T.....	North Bangor.....	5
Greene.....	Burgess, C. D.....	Grapeville.....	55
	Story, John W.....	Freehold.....	16
	House, John H.....	Miller's Mills.....	17
Herkimer.....	Miller, Howard.....	Ilien.....	2
	State School of Agriculture..	Morrisville.....	20
Madison.....	Forest Farms. (See Hale, Wm. B.)		
	Hale, Wm. B.....	Rochester.....	*78
	(Forest Farms)		
Montgomery.....	Dievendorf, A. H.....	Sprakers.....	7
Oneida.....	Jordan, Thomas R.....	Sauquoit.....	20
	Porter, E. C.....	Sauquoit.....	10
Onondaga.....	American Karakul Fur Sheep Co.....	Fayetteville.....	12
	Barnett, S. L.....	Skaneateles.....	19
	Dunham, Norton.....	Plainville.....	15
	Goodspeed, C. M.....	Skaneateles.....	5
	Long Meadow Land Co....	Syracuse.....	31
	Padget, H. G.....	Tully.....	3
	Haslett Bros.....	Seneca.....	97
	Robson Bros.....	Hall.....	62
	Wheeler, Will E.....	Holcomb.....	21
Orange.....	Brundage, Gregory, & Son..	Salisbury Mills.....	65
Orleans.....	Brace, B. W.....	Albion.....	28

* Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Orleans.....	Howes, A. C.....	Albion, Box 125.....	1
Schuyler.....	Auble, F. W.....	Trumansburg.....	12
Schoharie.....	Turner, Mrs. Adelia.....	Central Bridge.....	10
Steuben.....	Conine, F. B.....	Bath.....	75
	Miller, Eli.....	Woodhull.....	51
Sullivan.....	Horning, P.....	Callicoon.....	1
Tompkins.....	Hill, E. S., & Son.....	Freeville.....	35
Westchester.....	Ophir Farm.....	Purchase.....	250

KARAKUL

Onondaga.....	American Karakul Fur Sheep Co.....	Fayetteville.....	315
---------------	---------------------------------------	-------------------	-----

Persian Fur

Onondaga.....	American Karakul Fur Sheep Co.....	Fayetteville.....	250
Otsego.....	Gregory, F. L.....	Mt. Vision.....	4
	Hillis, G. M.....	South Worcester.....	8

Shiraz-Kreminer

Onondaga.....	American Karakul Fur Sheep Co.....	Fayetteville.....	7
---------------	---------------------------------------	-------------------	---

LEICESTER

Chautauqua.....	Lewis, F. S.....	Ashville.....	6
Chenango.....	Clark, E. A., & Sons.....	Greene.....	13
Franklin.....	Dwyer & Sons.....	North Bangor.....	15
Rensselaer.....	Edgewood Farm. (See Snow, J. F.)		
	Snow, J. F..... (Edgewood Farm)	West Stephentown.....	8
Schoharie.....	Cox Reuben V.....	Sloansville.....	2
	Karker, A. J.....	Cobleskill.....	17
Schuyler.....	Auble, F. W.....	Trumansburg.....	8

LINCOLN

Chautauqua.....	Lewis, F. S.....	Ashville.....	15
Greene.....	Alden, John.....	Freehold.....	2
Onondaga.....	American Karakul Fur Sheep Co.....	Fayetteville.....	97
	Dawley, F. E.....	Fayetteville.....	100
Orleans.....	Beckett, W. O.....	Knowlesville.....	8
St. Lawrence.....	Hamilton, E. C.....	Gouverneur.....	7
Schoharie.....	Barton, Wm. H.....	Central Bridge, R. D.....	10
Schuyler.....	Auble, F. W.....	Trumansburg.....	7
Seneca.....	Townsend, D. H., & Sons...	Interlaken.....	5

FIG. 30.—YEARLING HAMPSHIRE RAM.
(*Courtesy of Comfort A. Tyler, Coldwater, Mich.*)

FIG. 31.—IMPORTED KARAKUL RAM, ALEC — FUR TYPE.
(*Courtesy of F. E. Dawley, Fayetteville, N. Y.*)

**FIG. 32.—BORDER LEICESTER YEARLING EWE, WINNER OF FIRST PRIZE
AT HIGHLAND SHOW.**
(Courtesy of American Leicester Breeders' Association.)

FIG. 33.—LINCOLN SHEEP.

FIG. 34.— DELAINE EWE.

FIG. 35.— MERINO RAM, GOLD COIN, JR., BRED BY S. M. CLEAVER,
DELAWARE, OHIO.

This ram sheared more than 40 pounds of wool in 1917

FIG. 36.—RAMBOUILLET EWE.

FIG. 37.—A TYPICAL OXFORD DOWN.

MERINO
American

County in which stock is located	Owner	Address	Number of animals
Cayuga.....	Tryon, Howard.....	Auburn, R. D. 1.....	20
Chautauqua.....	Meade, W. P., & Son.....	Jamestown, R. D. 77.....	10
Schuyler.....	Auble, F. W.....	Trumansburg.....	7
Wyoming.....	Wellman, C. V., & Sons.....	Perry.....	40
Yates.....	Herrick, C. E.....	Middlesex.....	13

Black Top Spanish

Schuyler.....	Auble, F. W.....	Trumansburg.....	24
---------------	------------------	------------------	----

Delaine

Chautauqua.....	Meade, W. P., & Son.....	Jamestown, R. D. 77.....	15
Livingston.....	Preston, W. H.....	Springwater.....	14
Montgomery.....	Dievendorf, A. H.....	Sprakers.....	3
Schuyler.....	Auble, F. W.....	Trumansburg.....	36
Tompkins.....	Weatherby, J. C.....	Trumansburg.....	100
Wyoming.....	Pattridge, C. O., & Sons.....	Perry.....	27
	Wellman, C. V., & Sons.....	Perry.....	80

Rambouillet

Allegany.....	Sherman, H. P.....	Alfred Station.....	50
Essex.....	Moses, Frank M.....	Ticonderoga.....	7
Genesee.....	Judd, F. Howard.....	Linden.....	1
	Plue, C. D.....	Basom.....	35
Greene.....	Story, John W.....	Freehold.....	3
Livingston.....	Markham & Puffer.....	Avon.....	138
	Peabody, Geo. L.....	Springwater.....	5
	Preston, W. H.....	Springwater.....	23
Monroe.....	Adams, E. J.....	Spencerport.....	1
Schuyler.....	Auble, F. W.....	Trumansburg.....	9
Seneca.....	Townsend, D. H., & Sons.....	Interlaken.....	70
Tompkins.....	Cornell University.....	Ithaca.....	30
Wyoming.....	Pattridge, C. O., & Sons.....	Perry.....	29
	Wellman, C. V., & Sons.....	Perry.....	80
Yates.....	Wagar, F. H.....	Rushville.....	31

OXFORD DOWN

Allegany.....	Hazzard, D. S.....	Belmont.....	*40
	Lewis, C. W., & Sons.....	Alfred Station.....	25
Chenango.....	Collyer, S. H.....	Smithville Flats.....	1
	Dwight, Will.....	South Otselic.....	1
Columbia.....	Colbert, E. J.....	East Chatham.....	14
Dutchess.....	Bergh, John S.....	Jackson Corners.....	1
Erie.....	Martin Bros.....	Clarence Center.....	1
Essex.....	Norman, P. G.....	Westport.....	3
Livingston.....	Peabody, Geo. L.....	Springwater.....	5
Monroe.....	Colby, Wm. W.....	Spencerport.....	4

*Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Onondaga.....	Perry, Louis H.....	Clay.....	*10
Ontario.....	Buckelew, Arthur G.....	East Bloomfield.....	*97
Orleans.....	Hill, E. E.....	Knowlesville.....	7
	Pratt, J. Stanley.....	Knowlesville.....	15
Oswego.....	Hess, Chas. E., & Son.....	Phoenix.....	6
Otsego.....	Cunningham, H. L.....	Cooperstown.....	15
	McLaughlin, Edson.....	Unadilla.....	10
	Weeks, E. R.....	Springfield Center.....	20
Schoharie.....	Hoose, Wellington M.....	Warnerville.....	10
Schuyler.....	Auble, F. W.....	Trumansburg.....	14
	Buck, William P.....	Watkins, R. D. 2.....	25
Seneca.....	Robinson, Clarence.....	Interlaken.....	7
Steuben.....	Cady, Seward A.....	Troupsburg.....	20
Tioga.....	Hilbury, H. S.....	Owego, R. 3.....	30
	Mapledale Farm. (See Roper, Fred H.)		
	Roper, Fred H..... (Mapledale Farm)	Owego.....	6
Yates.....	Wagar, F. H.....	Rushville.....	6
SHROPSHIRE			
Albany.....	Stanton, Frank.....	Greenville.....	4
	Van Atten, B. F.....	Feura Bush.....	44
	Van Atten, Jacob A.....	Feura Bush.....	30
Allegany.....	Burdick, Geo. W.....	Nile.....	8
	Cotton, Geo. I.....	Friendship.....	7
	Gridley, Mrs. M. J., & Son..	Alfred Station.....	13
	Morton, Chas.....	Almond.....	41
	Seberry, R. B.....	Black Creek.....	13
Broome.....	Dunmore, Harry M.....	218 Main St., Binghamton..	50
Cayuga.....	Ferris, Geo. L.....	Atwater.....	2
	Morse, James S.....	Levanna.....	60
	Wait, H. A., & J. A.....	Auburn.....	7
Chautauqua.....	Fairbanks, Owen W.....	Ellington.....	21
Chenango.....	Hayden, Wm., & Son.....	McDonough.....	16
	Howard, C. R.....	Guilford.....	*7
Columbia.....	Berninger, Augustus C.....	Ghent.....	7
Delaware.....	Govern, M. A.....	Stamford.....	15
	McNaught, Colin M.....	Bovina Center.....	7
Dutchess.....	Barmore, Clark.....	LaGrangeville.....	30
Essex.....	Eggleston, R. W.....	Wadhams.....	20
	Gregory Bros.....	Olmstedville.....	1
	Moses, Frank M.....	Ticonderoga.....	4
Genesee.....	Farrant, Earl P.....	South Byron.....	*25
	Johncox, Geo.....	Darien Center.....	6
	Parnell, Chester A.....	Pavilion.....	3
	Walkley, Frank L.....	Le Roy.....	1

* Including pure-breds not registered.

FIG. 38.—SHROPSHIRE SHEARLING RAM.
(*Courtesy of P. D. Ward, Batavia, N. Y.*)

**FIG. 39.—YEARLING SOUTHDOWN RAM — FIRST AND CHAMPION AT TORONTO,
NEW YORK STATE FAIR, AND INTERNATIONAL LIVE STOCK EXPOSITION,
1916.**

(*Courtesy of American Southdown Breeders' Association*)

FIG. 40.—SUFFOLK DOWN.

FIG. 41.—TUNIS RAM, GUILLIAMS' PRIDE,
No. 2503.
(Courtesy of J. N. MacPherson,
Scottsville, N. Y.)

SHEEP — SHROPSHIRE

471

County in which stock is located	Owner	Address	Number of animals
Greene	Alden, A. M.	Freehold	25
	Story, John W.	Freehold	12
Herkimer	Hansel, F. L.	East Winfield	25
	House, John H.	Miller's Mills	11
Jefferson	Whaling, John, & Sons.	Carthage	6
Livingston	Bonn, G. W.	Springwater	1
	Herring, M. A.	Leicester	10
	Leathersick, Elsie M.	Caledonia	25
	Preston, W. H.	Springwater	33
	Reed, Stephen, & Son	Caledonia	30
Madison	Goslee, H. H., & Son	Oneida	20
	State School of Agriculture	Morrisville	9
Monroe	Beadle, J. E.	Brockport	1
	Davis, Arthur S.	Chili Station	100
	Harris, C. L. & G. H.	Penfield	12
	Vink, C., & Son	Churchville	20
Niagara	Stevens Bros.	Wilson	37
Oneida	Comstock, W. G.	Clinton	6
	Kenotin Farm	Washington Mills	27
	Rathbun, F. G.	Verona	10
Onondaga	Thorne, Wm. T.	Skaneateles	41
Ontario	Burnette, Frank H.	Phelps	*8
	Calman Bros.	Canandaigua	10
	Springstead, Chas. W.	Naples	40
Orleans	Braley, B. B.	Albion	1
	Conover, Milton	Lyndonville	3
	Hill, E. E.	Knowlesville	48
	La Mont, Geo. B.	Albion	1
Oswego	Pickens, D. W.	Mexico	10
Otsego	Harrison, Lyman D.	Mount Vision	8
	Hathaway, W. S.	Otego	25
	Hillis, G. M.	South Worcester	4
	King, Philip	Richfield Springs	1
	Robinson, Gustave A.	Richfield Springs	24
	Shaw, E. L.	Fly Creek	6
	Wait, James A.	Otego	*26
	Wardwell, Henry L.	Springfield Center	394
Rensselaer	Hayner, B. W.	Troy, R. D. 5	3
	Herrington, Nathan W.	Hoosick Falls	7
St. Lawrence	Armstrong, W. E. & W. H.	Lisbon, R. D. 2	9
	Philpot, J. G.	Canton, R. D. 3	1
Schoharie	Crosby Brothers	Carlisle	11
Schuyler	Evans, M. E.	Reynoldsville	3
	Hall, Miller, Estate	Alpine	4
	Hausner, C. W.	Odessa	21
	Johnson, Howard H.	Burdett	17

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Seneca.....	Covert, H. B.....	Lodi.....	100
	Mellen, Chas. R.....	Geneva.....	1
Steuben.....	Gardner, Arthur.....	Cohocton.....	1
	Paul, Hiram.....	Woodhull.....	70
Suffolk.....	Johnston, J. Herbert.....	Huntington.....	18
Tioga.....	Ball, Stephen L.....	Berkshire.....	1
	Blewer, Fred A.....	Owego, R. D. 3.....	12
	Giles, C. F.....	Apalachin.....	30
	Hollister, E. J.....	Owego, R. D. 1.....	15
	Personeus, Melvin.....	Candor.....	1
	Smith, Lawrence F.....	Lockwood.....	3
Tompkins.....	Cornell University.....	Ithaca.....	50
	Dorn, F. E.....	Brooklinton.....	40
	Edsall, Chas.....	Freeville.....	3
	Lormor, James E.....	Dryden.....	6
	Smith, Jerry A.....	Ludlowville.....	1
	Updike, Fred.....	Trumansburg.....	2
	Wixom, Frank.....	Trumansburg.....	4
Washington.....	Beadle, J. H.....	Hartford.....	14
	Borden R. A., Est.....	Schaghticoke.....	6
	Gibson, Jess.....	South Hartford.....	45
Wayne.....	Huntley, C. M.....	Walworth.....	18
Wyoming.....	Brown, Mrs. Mary G.....	Wyoming.....	34
	Patridge, C. O., & Sons....	Perry.....	27
	Tuttle, W. H.....	Perry.....	1

SOUTHDOWN

Chenango.....	Clark, B. A., & Sons.....	Greene.....	3
Clinton.....	Heart's Delight Farm.....	Chazy.....	141
	Miner, W. H. (See Heart's Delight Farm)		
Delaware.....	McLaughlin, D. L.....	Tacoma.....	15
Dutchess.....	Haight, Henry J.....	Dover Plains.....	*16
Livingston.....	Hamilton, N. V.....	Caledonia.....	60
	Sage, Elmer F.....	Avon.....	12
	Trewer, T. S.....	Mount Morris.....	*25
Niagara.....	Rumsey, L. D.....	Youngstown.....	1
Rensselaer.....	Cottrell, Case.....	Hoosick Falls.....	1
	Ellis, Chas. B.....	Stephentown.....	18
Schoharie.....	Karker, A. J.....	Cobleskill.....	14
Tompkins.....	Allen, F. R.....	Ithaca.....	36
Wyoming.....	Patridge, C. O., & Sons....	Perry.....	50

SUFFOLK DOWN

Jefferson.....	Orvis, Geo. E.....	Black River.....	3
Schoharie.....	Jackson, J. A.....	Mineral Springs.....	10
Schuyler.....	Auble, F. W.....	Trumansburg.....	11

* Including pure-breds not registered.

FIG. 42.—ANGORA GOATS ON FARM OF JESSE F. SNOW, WEST STEPHEN-
TOWN, N. Y.—U. S. G. LAD NO. 72757 AND SOME OF HIS KIDS.
A 12-Months' Growth Clipped 14 Pounds.

FIG. 43.—TYPICAL BUCK AND DOE OF SAANEN MILCH GOAT.
(Courtesy of C. L. Nicholls, Lockport, N. Y.)

GOATS

475

County in which stock is located	Owner	Address	Number of animals
Seneca.....	Robinson, Clarence.....	Interlaken.....	10
Tompkins.....	Hill, E. S., & Son.....	Freeville.....	15

TUNIS

Broome.....	Smith, Arthur D.....	Binghamton, R. D. 3.....	*25
Cayuga.....	Bradley, E. G.....	Aurora.....	7
Columbia.....	Ogden, Alfred T.....	Kinderhook.....	15
Delaware.....	McLaughlin, D. L.....	Tacoma.....	10
Dutchess.....	Alley, Jesse H.....	La Grangeville.....	35
Jefferson.....	Shelmidine, J. D., & Sons...	Lorraine.....	3
Livingston.....	Hamsher, Chas A.....	Dansville.....	1
Monroe.....	MacPherson, J. Newton....	Scottsville.....	225
Ontario.....	Pennell, W. T.....	Honeoye.....	150
Oswego.....	Owen, Ralph E.....	Fulton.....	30
Otsego.....	Gregory, F. L.....	Mt. Vision.....	20
	Hillis, G. M.....	South Worcester.....	16
Schoharie.....	Jackson, J. A.....	Mineral Springs.....	10
Schuyler.....	Auble, F. W.....	Trumansburg.....	12
Sullivan.....	Brooks, Frank.....	Grahamsville.....	4
Tioga.....	Williams, Edsun.....	Newark Valley.....	25

GOATS

ANGORA

Cayuga.....	Morse, James S.....	Levanna.....	4
Chautauqua.....	Lewis, F S.....	Ashville.....	17
Jefferson.....	Liscum, Leslie E.....	Adams.....	10
Rensselaer.....	Edgewood Farm. (See Snow, J. F.)		
	Snow, J. F..... (Edgewood Farm)	West Stephentown.....	12
Schuyler.....	Auble, F. W.....	Trumansburg.....	11
	Shriner, W.....	Hector.....	5
Washington.....	Roberson, Albert H.....	Shushan.....	*13

MILCH

Schuyler.....	Auble, F. W.....	Trumansburg.....	12
---------------	------------------	------------------	----

SWINE

[477]

SWINE

NATIONAL ASSOCIATIONS

Berkshire

American Berkshire Association

Frank S. Springer, secretary, 510 East Monroe St., Springfield, Ill.

Cheshire

Cheshire Swine Breeders' Association

Ed. S. Hill, secretary, Freeville, N. Y.

Chester-White

The American Chester-White Swine Record Association

F. F. Moore, secretary, Rochester, Ind.

Chester-White (Ohio Improved)

The O. I. C. Swine Breeders' Association

O. C. Vernon, secretary, Goshen, Ind.

Duroc-Jersey

The American Duroc-Jersey Swine Breeders' Association

Robert J. Evans, 817 Exchange Ave., Chicago, Ill.

Essex

American Essex Association

F. M. Srout, secretary, Box 138, Atkinson, Ill.

Hampshire

American Hampshire Swine Record Association

E. C. Stone, secretary, Peoria, Ill.

Poland China

National Poland China Record Association

A. M. Brown, secretary, Winchester, Ind.

Tamworth

The American Tamworth Swine Record Association

E. N. Ball, secretary, Hamburg, Mich.

Yorkshire (Large)

The American Yorkshire Club

Harry G. Krum, secretary-treasurer, 609 Germania Life Bldg., St. Paul Minn.

STATE AND COUNTY ASSOCIATIONS

Duroc-Jersey

Kinderhook Duroc-Jersey Breeders' Association

R. P. McVaugh, secretary, Kinderhook, N. Y.

SWINE

BERKSHIRE

County in which stock is located	Owner	Address	Number of animals
Allegany.....	Lynde, Grant R.....	Centerville.....	3
	Witter, E. H.....	Cuba.....	6
Broome.....	Root, Dr. R. T.....	120 Main St., Binghamton..	1
Cattaraugus.....	Haley, James M.....	Irving, R. F. D.....	6
	Merrill, Lee L.....	South Dayton.....	*2
Cayuga.....	Bower, John I., & Son.....	King Ferry.....	13
	Eldredge, C. A.....	Auburn, R. D. 5.....	12
	Faba, Paul J.....	Atwater.....	1
	Hart, Charles M.....	Locke, R. D. 20.....	3
	Matison, Oscar.....	Locke.....	3
	Tryon, Howard.....	Auburn.....	3
	Wait, H. A. & J. A.....	Auburn.....	12
	Whitman, Fred E.....	Moravia.....	20
	Erving, R. W.....	Sinclairville.....	9
Chautauqua.....	Near Bros.....	Jamestown.....	4
	Webster, Chas.....	Dewittville.....	2
	Webster, Chas.....	Dewittville.....	2
Chenango.....	Dwight, Will.....	South Otselic.....	11
	Hayden, Wm., & Son.....	McDonough.....	12
	Moot, Arthur.....	Lincklaen.....	3
	Tarbell, Gage E..... (Tarbell Farms)	Smithville Flats.....	40
Clinton.....	Schermerhorn, G. B.....	Keeseville.....	1
Columbia.....	State Farm for Women.....	Valatie, Box 415.....	2
Delaware.....	Gerry, Louisa M.....	Delhi.....	3
	Hubbell Bros.....	Fishs Eddy.....	1
	McNaught, Colin M.....	Bovina Center.....	4
Dutchess.....	Ham, John M.....	Millbrook.....	5
	Webb, J. G.....	Clinton Corners.....	27
Erie.....	Kerr, T. J.....	Collins.....	8
Franklin.....	Beyett, H. H.....	North Bangor.....	1
Genesee.....	Boatfield, Howard J.....	Le Roy.....	1
	Judd, F. Howard.....	Linden.....	2
	Waldron, Nelson.....	Batavia.....	2
	Willman, M. I.....	Pavilion.....	4
Greene.....	Healey, J. F..... (Sunside Farm)	Sunside.....	*7
	Peck, Chas. A.....	Hensonville.....	2
	Story, Clinton M.....	Freehold.....	1
	Story, Ralph T.....	Freehold.....	4
	Sunside Farm. (See Healey, J. F.)		
Jefferson.....	Liscum, Leslie E.....	Adams.....	1

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Lewis.....	Zimmer, C. H.....	Constableville.....	22
Madison.....	State School of Agriculture.	Morrisville.....	2
Monroe.....	Beadle, J. E.....	Brockport.....	21
	Cloverdale Farm.....	Charlotte.....	18
	Harris, C. L. & G. H.....	Penfield.....	12
	Hinchey, W. S.....	Rochester, Box 729.....	9
	Lunt, C. S.....	Rochester.....	18
	Tenny, Wm. J.....	Hamlin.....	2
Montgomery.....	Elwood, John S.....	Fort Plain, R. D. 3.....	3
Nassau.....	Davis, Albert J.....	Jericho.....	20
	Robbins, Francis L., jr.....	Woodbury.....	7
New York.....	Moore, John F.....	136 West 92 St., New York City.....	11
	Velasco & Co.....	New York City.....	23
Niagara.....	Nicholl, C. L. & H. M.....	Lockport.....	*40
	Powell, W. H., & Son.....	Lewiston.....	4
Oneida.....	Fuller, Bradley.....	115 Genesee St., Utica.....	5
	Kline, G. J.....	Stittville.....	1
	Lampman, Peter.....	Vernon Center.....	15
	Owens, G. H.....	Ava.....	5
	Schader, John.....	Durhamville.....	3
Onondaga.....	Goodspeed, C. M.....	Skaneateles.....	6
	Martin, H. L.....	Baldwinsville.....	5
	Thorne, Wm. T.....	Skaneateles.....	1
Ontario.....	Black, W. D.....	Hall.....	7
	Burnette, Frank H.....	Phelps.....	*3
	Long, Frances R. C.....	Naples.....	5
	Robson Bros.....	Hall.....	10
Orange.....	Harris, Wm. H.....	Newburgh, R. D. 3.....	3
	Wood, Wm. R.....	Newburgh.....	150
Orleans.....	Brace, B. W.....	Albion.....	30
	Broun, H. L.....	Waterport.....	34
	Howes, A. C.....	Albion, Box 125.....	3
	Ludington V. D., & Son....	Holley.....	2
Oswego.....	Hall, Clarence E.....	Phoenix.....	1
	Mosher, R. C.....	Parish.....	5
	Pickens, D. W.....	Mexico.....	10
	Rose, Geo. C.....	Lycoming.....	3
	Soule, F. C., & Sons.....	Cleveland.....	6
	(Vanderkamp Farms)		
	Vanderkamp Farms. (See Soule, F. C.)		
Otsego.....	Glimmerglen Farms.. (See Hyde, W. T.)		
	Hyde, W. T.....	Cooperstown.....	2
	(Glimmerglen Farms)		
	Wardwell, Henry L.....	Springfield Center.....	15
	Wolfen Bros.....	Burlington Flats.....	21

* Including pure-breds not registered.

FIG. 44.—DEKSHIRES.

FIG. 45.—CHESHIRE SOW.

FIG. 46.—CHESTER WHITE SOW AND PIGS.



**FIG. 47.—TWO-MONTH-OLD O. I. C. SOWS. OWNED BY
B. F. PHILLIPS & SONS, EAST BLOOMFIELD, N. Y.**

County in which stock is located	Owner	Address	Number of animals
Rensselaer	Cottrell, Case	Hoosick Falls	1
	Evans, James	Schaghticoke	2
St. Lawrence	Armstrong, W. E. & W. H. ..	Lisbon, R. D. 2	*8
	Bancroft, Earl	Edwards	*2
	Crapser Island Farms, Inc. ..	Waddington	1
	Hill, J. Edwin	Gouverneur	4
	Philpot, J. G.	Canton, R. D. 3	2
	Rodger, M. J.	Hammond	4
	State School of Agriculture ..	Canton	12
Saratoga	Gick, Frank	Saratoga Springs	3
	Metropolitan Life Insurance Co.	Mt. McGregor	11
Schenectady	McQuade, E. J.	Duanesburg	3
Schoharie	Armstrong, Erskine W.	Schoharie	10
	Barton, Wm. H.	Central Bridge, R. D.	1
	Mix, F. G. & Wm. P.	Schoharie	5
Schuyler	Frost, Geo. A.	Montour Falls	6
	Simmons, R. F.	Burdett	1
Seneca	Kinne, H. M.	Romulus	5
Steuben	Guile, W. R.	Wayland	1
	Hoyt, E. M., & Son	Jasper	1
	Sherman, Frank L.	Bath	1
	Speer, Harry L.	Corning, R. D. 7	1
	Woodward, G. R.	Woodhull	4
Suffolk	Brown, Lathrop	St. James	4
	Darnell, W. L. W.	Eastport	5
	Kings Park State Hospital. ..	Kings Park	2
	Robbins, Harry Pelham	Southampton	1
	Wilson, J. V.	Jamesport	6
Sullivan	Brooks, Frank	Grahamsville	1
	Clement, D. H.	Liberty	2
	Craig, B. P., R. M., & K. M. ..	Glen Spey	25
	(Thornliebank Farm)		
	Thornliebank Farm (See Craig, B. P.)		
Tioga	Ball, Stephen L.	Berkshire	1
	Barrott, A. F.	Newark Valley	6
	Mapledale Farm. (See Roper, Fred H.)		
	Overlander, A. J.	Owego	1
	Roper, Fred H.	Owego	4
	(Mapledale Farm)		
	Tilbury, H. S.	Owego, R. D. 2	25
Tompkins	Cook, James C.	Caroline Depot	1
	Skilling, Fay	Freeville	1
	Stone, Richard H.	Trumansburg	27
	Weatherby, J. C.	Trumansburg	4
	Wixom, Frank	Trumansburg	10

* Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Ulster.....	De Witt, Matthew Ten Eyck.....	Hurley.....	1
Warren.....	Hudnut, Richard A.....	North Creek.....	*1
Washington.....	Brown, Joseph.....	Fort Edward.....	2
	Guthrie Bros.....	Greenwich.....	7
Wayne.....	Lembke, Fred W.....	Lyons.....	3
	Phelps, F. M.....	Newark.....	*2
Yates.....	Harpending, H. C. & H. B...	Dundee.....	450
	Herrick, C. E.....	Middlesex.....	1
	Payne, Edgar S.....	Penn Yan.....	1
	Walton, G. B.....	Dundee.....	2

CHESHIRE

Cayuga.....	Morgan, S. W.....	Poplar Ridge.....	*1
	Otis, S. G.....	Venice Center.....	12
Chautauqua.....	Lewis, F. S.....	Ashville.....	4
Madison.....	Button, R. D.....	Canastota.....	15
Monroe.....	Forest Farms. (See Hale, Wm. B.)		
	Hale, Wm. B.....	Rochester.....	*34
	(Forest Farms)		
Montgomery.....	Dievendorf, A. H.....	Sprakers.....	5
St. Lawrence.....	Bancroft, Earl.....	Edwards.....	*2
Seneca.....	Townsend, D. H., & Sons...	Interlaken.....	5
Suffolk.....	Hallock, E. J.....	Riverhead.....	1
Tompkins.....	Brown, M. S.....	Ithaca, R. D. 2.....	*10
	Cornell University.....	Ithaca.....	50
	Hill, E. S., & Son.....	Freeville.....	10
	Snyder, Earl J.....	West Danby.....	1
	Tailby, G. W., jr.....	Ithaca.....	1
	Updike, Fred.....	Trumansburg.....	2
Wyoming.....	Smith, G. E.....	Castile.....	8

CHESTER WHITE

Albany.....	Filkins, Avery C.....	Westerlo.....	1
	Hardscrabble Farm. (See Leonard, Gardner C.)		
	Leonard, Gardner C.....	Altamont.....	1
	(Hardscrabble Farm)		
	Slingerland, Amasa.....	Delmar.....	1
	Ten Eyck, Peter G.....	Altamont.....	5
	Van Atten, B. F.....	Feura Bush.....	16
Allegany.....	Heddon, Stanley.....	Cuba.....	1
	Sherman, H. P.....	Alfred Station.....	3
Cayuga.....	Mitchell, C. T.....	Union Springs.....	2
	Mosher, Amos, & Son.....	Union Springs.....	*17
	Palmer, C. D.....	Atwater.....	2

*Including pure-breds not registered.

County in which stock is located	Owner	Address	Number of animals
Cayuga.....	Pease, C. Henry.....	Mapleton.....	4
Chautauqua.....	Cowden, L. D.....	Fredonia.....	7
Chenango.....	Parker, Ray W.....	Coventry.....	1
Clinton.....	Heart's Delight Farm.....	Chazy.....	211
	Miner, W. H. (See Heart's Delight Farm)		
Columbia.....	Colbert, E. J.....	East Chatham.....	6
Delaware.....	Risley, E. E.....	Walton.....	17
Essex.....	Bigelow, F. E.....	Whallonsburg.....	2
	Braisted, George A., & Son.	Westport.....	1
	Moses, Frank M.....	Ticonderoga.....	1
	Singleton, John E.....	Willsboro.....	3
Greene.....	Calder, John J.....	Freehold.....	5
	Palmer, Oliver.....	Catskill.....	1
	Story, L. M.....	Freehold.....	8
Jefferson.....	Whaling, John, & Son.....	Carthage.....	2
Livingston.....	Peabody, George L.....	Springwater.....	1
	Preston, W. H.....	Springwater.....	15
Madison.....	Chard, W. G.....	Cazenovia.....	10
	(Meadowood Farms)		
	Meadowood Farms (See Chard, W. G.).		
Nassau.....	Pulitzer, Ralph.....	Manhasset.....	8
New York.....	Velasco & Co.....	New York City.....	32
Oneida.....	Johnson, John B.....	Rome, R. D. 4.....	25
Onondaga.....	Pendergast, S. W.....	Phoenix.....	1
Orange.....	Chamberlain, E. D. & J. C.	Chester.....	3
Rensselaer.....	Kimmey, F. B.....	East Greenbush.....	4
Rockland.....	Meyer, Henry Von L.....	Suffern.....	2
Schoharie.....	Hoose, Wellington M.....	Warnerville.....	1
Steuben.....	Gardner, Arthur.....	Cohocton.....	6
Suffolk.....	Tuthill, F. H., & Son.....	Rocky Point.....	1
Sullivan.....	Wackar, A., sr.....	Hortonville.....	3
Tompkins.....	Allen, F. R.....	Ithaca.....	3
	Baker, Andrew.....	Freeville.....	6
Ulster.....	Leggett, Francis H., Est....	Stone Ridge.....	15

CHESTER WHITE (O. I. C.)

Allegany.....	Clarke, E. E.....	Andover.....	3
Chenango.....	Greene, Clifford E.....	Greene.....	5
Cortland.....	Brown, John S.....	Cincinnatus.....	3
Dutchess.....	Bergh, John S.....	Jackson Corners.....	16
	Hubbard, George C.....	Red Hook.....	2
Greene.....	Burgess, C. D.....	Grapeville.....	2
Herkimer.....	House, John H.....	Miller's Mills.....	1
Jefferson.....	Farley, Walter J.....	Carthage.....	5
	Shelmidine, J. D., & Sons..	Lorraine.....	8
Monroe.....	Mattison, L. O.....	Chili Station.....	2

* Including pure-breeds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Oneida	Brooks, E. W.	Deansboro	1
	Higgins, Howard H.	Glenmore	2
	Jones, Benjamin F.	Marcy	2
	Schader, John	Durhamville	6
Onondaga	Barnett, S. L.	Skaneateles	2
	Gridley, Oliver G.	Kirkville	1
	Haith, H. J.	Manlius	*22
	Laird, C. W., & Son	Memphis	3
	Pendergast, S. C.	Phoenix	3
	Strickland, Clair	Camillus	5
	Townsend, Jay G.	Memphis	3
Orange	Chamberlain, E. D. & J. C.	Chester	3
	Schmid, Julius	Montgomery	1
Oswego	Kelly, Alex.	Redfield	1
	Pontiac Farm (See Travis, A. Lincoln).		
	Travis, A. Lincoln (Pontiac Farm)	Oswego	2
Otsego	House, Herman	Richfield Springs	*3
	Palmer, Floyd B.	Richfield	4
Rensselaer	Yates, Charles	Schaghticoke	6
St. Lawrence	Hoyt, Loyal L.	Winthrop	3
	Sweet, S. E.	Spragueville	10
Saratoga	Rogers, Eugene P.	Wayville	7
Schenectady	Hanson, W. T.	Schenectady	3
Schoharie	Babcock, Elias	Schoharie, R. D. 2	5
Schuyler	Auble, F. W.	Trumansburg	3
	Evans, M. E.	Reynoldsville	1
	Hall, Miller, Estate	Alpine	8
Seneca	Mellen, Charles R.	Geneva	2
Steuben	Paul, Hiram	Woodhull	4
	Watkins, George J., & Son	Bath	3
Sullivan	Happich, L. J.	North Branch	1
	Hornung, P.	Callicoon	1
	Schick, John	Obernburg	1
Tompkins	Dates, J. D.	Groton	2
	Edsall, Charles	Freeville	3
	Skilling, Fay	Freeville	1
	Smith, Jerry A.	Ludlowville	7
Wayne	Lockwood, George	Clyde	1
Westchester	Baker, Charles H.	Mohegan Lake	30
	(Mohegan Farm)		
	Mohegan Farm (See Baker, Charles H.).		
Yates	Ardrey, George	Dundee	3
	Beyea, Vern	Dundee	1

*Including pure-breds not registered.

FIG. 48.—DUBOC-JERSEY SOW, NEW YORK STATE FAIR, 1913.

FIG. 49—ESSEX BOAR.

FIG. 50. — HAMPSHIRE BOAR, NEW YORK STATE FAIR, 1913.

FIG. 51.— MULEFOOT SOW.

DUROC JERSEY

County in which stock is located	Owner	Address	Number of animals
Albany.....	Filkins, Avery C.....	Westerlo.....	1
	Ten Eyck, Peter G.....	Altamont.....	4
	Whitney, C. L. A.....	Albany.....	30
Cayuga.....	Crocker, H. C., & Son.....	Sennett.....	21
	Lake View Stock Farm.....	Union Springs.....	60
Chautauqua.....	Lewis, F. S.....	Ashville.....	5
Chemung.....	Scudder Bros.....	Elmira.....	3
Chenango.....	Barnes, C. E.....	Oxford.....	65
	Hofman, Ludwig.....	Smithville Flats.....	2
	Mowry, John H.....	Sherburne.....	1
Clinton.....	Bateman, H. S.....	Champlain.....	7
Columbia.....	McVaugh, Roy.....	Kinderhook.....	19
	Ogden, Alfred T.....	Kinderhook.....	6
	Palmer, C. M.....	Valatie.....	3
	Sunnyside Farm (See Van Alstyne, Edward, & Son)		
	Van Alstyne, Edward, & Son (Sunnyside Farm)	Kinderhook.....	10
	Tyawhinney, G. S.....	Chatham, Box 55.....	*7
	Wilson, Harold, jr.....	Clermont.....	4
	Woolverton, H. B.....	Valatie.....	1
Delaware.....	Nicoll, A. J.....	Delhi.....	2
	Robbins, David.....	Walton.....	5
Erie.....	Willett, Denton G.....	Collins.....	1
Essex.....	Cook, Albert F.....	Whallonsburg.....	5
Greene.....	Story, John W.....	Freehold.....	5
Jefferson.....	Gillette, E. S.....	Watertown.....	15
	Zimmer, Louis.....	La Fargeville.....	2
Livingston.....	McKenzie, Duncan.....	Linwood.....	*13
Madison.....	Hadlock, F. M.....	Eaton, R. D. 1.....	3
	King, Henry T.....	Chittenango.....	5
	Lee, Jay W.....	New Woodstock.....	1
Monroe.....	Craw, Selden S.....	Chili Station.....	1
	Garrett, John.....	Clarkson.....	3
Oneida.....	Cummings, J.....	Remsen, R. D. 2.....	2
Onondaga.....	Beach, George B.....	Skaneateles.....	1
Ontario.....	Ingraham, F. B.....	Naples.....	3
Oswego.....	Bonner, Claud.....	Richland.....	6
Otsego.....	Brimmer, A. G.....	Mt. Vision.....	3
	Potter, Frank D.....	Oneonta, R. D. 2.....	1
Rockland.....	Cutler, Otis H.....	Suffern.....	8
Saratoga.....	Daniels, J. M.....	Greenfield Center.....	2
Seneca.....	Townsend, D. H., & Sons...	Interlaken.....	5
Steuben.....	Lamson, H. S.....	Cameron.....	16
Suffolk.....	Aldrich, Gilbert E.....	Mattituck.....	4
Tompkins.....	Allen, F. R.....	Ithaca.....	6

*Including pure-breds not registered.

OWNERS OF PURE-BRED LIVE STOCK

County in which stock is located	Owner	Address	Number of animals
Washington.....	Batchelder, A. C.....	Fort Ann.....	2
Wyoming.....	Towne & Fuller.....	Castile.....	1

ESSEX

Cattaraugus.....	Lafferty, Charles.....	Little Valley.....	12
Chautauqua.....	Lewis, F. S.....	Ashville.....	7
St. Lawrence.....	Hamilton, E. C.....	Gouverneur.....	5
Schuyler.....	Auble, F. W.....	Trumansburg.....	1
Seneca.....	Townsend, D. H., & Sons...	Interlaken.....	5

HAMPSHIRE

Allegany.....	Lewis, C. W., & Sons.....	Alfred Station.....	5
Chautauqua.....	Forbes, Ray.....	Jamestown.....	1
Clinton.....	Heart's Delight Farm.....	Chazy.....	42
	Miner, W. H. (See Heart's Delight Farm)		
Delaware.....	Stevens, George, & Sons....	Stanford.....	18
Erie.....	Pierce, Duncan H.....	Derby.....	1
Genesee.....	Wessendorf, John.....	Byron.....	2
Greene.....	Scofield, L. W.....	Freehold.....	1
Livingston.....	Sin Clair, J. E.....	Caledonia.....	2
Madison.....	Rivenburgh, F. H.....	Stockbridge.....	35
Monroe.....	Davis, Arthur S.....	Chili Station.....	25
Montgomery.....	Faulknor, Abram M.....	Ansterdam, R. D. 3.....	4
Niagara.....	Doty, Walter E.....	Lockport.....	3
Onondaga.....	Dunham, Mrs. Norvilla....	Plainville.....	7
St. Lawrence.....	Hamilton, E. C.....	Gouverneur.....	17
Schuyler.....	Auble, F. W.....	Trumansburg.....	4

MULEFOOT

Madison.....	Gee, C. A.....	New Woodstock.....	2
Monroe.....	MacPherson, J. Newton....	Scottsville.....	30
Nassau.....	Nichols, John W. T.....	Cold Spring Harbor.....	5
Orange.....	Brown, Walter H.....	Salisbury Mills.....	9

POLAND CHINA

Albany.....	Stanton, Frank.....	Greenville.....	6
Allegany.....	Murdough, J. T.....	Oramel.....	1
Chautauqua.....	Lewis, F. S.....	Ashville.....	6
Dutchess.....	Decker, Laura.....	Stanfordville.....	2
Erie.....	Miller, F. W.....	46 West Market St., Buffalo	9
Greene.....	Alden, A. M.....	Freehold.....	15
	Burgess, C. D.....	Grapeville.....	1
Montgomery.....	Van der Veer, G. H.....	Amsterdam, R. D. 2.....	2
New York.....	Velasco & Co.....	New York City.....	50

* Including pure-breds not registered.

FIG. 52.—POLAND-CHINA SOW, NEW YORK STATE FAIR, 1913.

FIG. 53.—TAMWORTH SOW.



FIG. 54.—TYPICAL YORKSHIRE SOW.

FIG. 55.—PRIZE-WINNING SMALL YORKSHIRE BOAR.

County in which stock is located	Owner	Address	Number of animals
Schuyler.....	Auble, F. W.....	Trumansburg.....	2
Seneca.....	Seeley, R. F.....	Waterloo.....	10
	Townsend, D. H., & Sons...	Interlaken.....	5
Washington.....	Wright, George S.....	Cambridge.....	10

SUFFOLK

Schuyler.....	Auble, F. W.....	Trumansburg.....	3
---------------	------------------	------------------	---

TAMWORTH

Montgomery.....	Smith, J. Harvey.....	Fort Plain.....	6
Onondaga.....	Dawley, F. E.....	Fayetteville.....	40
Otsego.....	Glimmerglen Farms (See Hyde, W. T.).		
	Hyde, W. T..... (Glimmerglen Farms)	Cooperstown.....	23
Schuyler.....	Auble, F. W.....	Trumansburg.....	2
Seneca.....	Townsend, D. H. & Sons...	Interlaken.....	5

VICTORIA

Schuyler.....	Auble, F. W.....	Trumansburg.....	2
---------------	------------------	------------------	---

YORKSHIRE (LARGE)

Cattaraugus.....	Eddy, Robert D.....	Cattaraugus.....	9
Chautauqua.....	Lewis, F. S.....	Ashville.....	4
Chenango.....	Collyer, S. H.....	Smithville Flats.....	6
Clinton.....	Heart's Delight Farm.....	Chazy.....	333
	Miner, W. H. (See Heart's Delight Farm)		
Genesee..	Acker, A. F.....	East Bethany.....	12
Niagara.....	Ouchie, E. P.....	Martinsville.....	5
Onondaga.....	Bahe, William.....	Onondaga Hill.....	15
Orange.....	Cathvart, R. Harry.....	Newburgh.....	5
Schuyler.....	Auble, F. W.....	Trumansburg.....	2
Seneca.....	Townsend, D. H., & Sons...	Interlaken.....	5
Ulster.....	Yama Farms.....	Napanoch.....	7
Wyoming.....	Coxe, Huron A.....	Wyoming.....	3

YORKSHIRE (SMALL)

Greene.....	Jennings, Clarence H.....	Freehold.....	1
Orleans.....	Miller, John T.....	Albion, R. D. 4.....	*17
Schuyler.....	Auble, F. W.....	Trumansburg.....	2
Seneca.....	Townsend, D. H., & Sons...	Interlaken.....	5

*Including pure-breds not registered.

FIG. 1.— F. W. SESSIONS, PRESIDENT OF THE NEW YORK STATE AGRICULTURAL
SOCIETY, 1917.



STATE OF NEW YORK
DEPARTMENT OF AGRICULTURE

CHARLES S. WILSON *Commissioner*

Bulletin 92

PROCEEDINGS

OF THE

EIGHTY-FIFTH ANNUAL MEETING

OF THE

New York State Agricultural Society

IN COOPERATION WITH THE

STATE DEPARTMENT OF AGRICULTURE

1917

CONTENTS

	PAGE
Officers for 1917.....	503
Standing Committees	504
Presidents	505
Constitution	509
Program	511
Annual Meeting:	
Opening Remarks, President F. W. Sessions.....	513
Report of Committee on Legislation, C. Fred Boshart.....	513
Report of Committee on Publicity, H. H. Charles.....	528
Conservation in Relation to Agriculture, George E. Pratt.....	532
Report of Committee on Membership, L. C. Tuckerman.....	544
Report of Committee on Co-operation and Marketing, J. W. Pincus.	550
A System of Direct Distribution between Producer and Consumer, Rev. J. L. Levy.....	562
Marketing Fundamentals and Cooperation, L. D. H. Weld.....	576
Financing the Insolvent Farmer, Leonard G. Robinson.....	586
Parcel Post, Thomas F. Degnan.....	597
Governor's Address, Hon. Charles S. Whitman.....	599
Agricultural Problems, American and European, Jacob G. Schurman.	605
Work of the National Dairy Council, Julius Kahn.....	616
President's Address, F. W. Sessions.....	623
Secretary's Report, Harry B. Cole.....	628
Treasurer's Report, Harry B. Winters.....	632
Report of Committee on Nominations, George W. Sisson, jr.....	639
Report of Committee on Resolutions, Gilbert M. Tucker.....	644
Duty of Our State Legislators to Our Agricultural Institutions, Dr. W. H. Jordan.....	651
Work of the Wicks Committee, Charles W. Wicks.....	659
Food Boycotts, E. S. Bayard.....	673
What the Dairymen's League is Doing, R. D. Cooper.....	683
List of Members.....	693

ILLUSTRATIONS

	PAGE
Fig. 1. F. W. Sessions.....	498
Fig. 2. C. Fred Boshart.....	515
Fig. 3. H. H. Charles.....	529
Fig. 4. George D. Pratt.....	535
Fig. 5. Lucius C. Tuckerman.....	545
Fig. 6. Joseph W. Pincus.....	551
Fig. 7. Rabbi J. Leonard Levy.....	563
Fig. 8. Professor L. D. H. Weld.....	577
Fig. 9. Leonard G. Robinson.....	587
Fig. 10. Governor Charles S. Whitman.....	601
Fig. 11. Dr. Jacob Gould Schurman.....	607
Fig. 12. Harry B. Winters.....	633
Fig. 13. George W. Sisson.....	641
Fig. 14. Gilbert M. Tucker.....	647
Fig. 15. Senator Charles W. Wicks.....	661
Fig. 16. E. S. Bayard.....	675
Fig. 17. R. D. Cooper.....	685

OFFICERS FOR 1917

PRESIDENT

F. W. Sessions, Utica

VICE-PRESIDENTS

First District.— L. C. Tuckerman, Milton

Second District.— H. B. Fullerton, Medford

Third District.— Gilbert M. Tucker, Albany

Fourth District.— Dean H. E. Cook, Canton

Fifth District.— W. N. Giles, Skaneateles

Sixth District.— F. G. Helyar, Morrisville

Seventh District.— Seth J. T. Bush, Morton

Eighth District.— F. N. Godfrey, Olean

Ninth District.— F. A. Taber, Poughkeepsie

SECRETARY

Harry E. Cole, Albany

TREASURER

Harry B. Winters, Albany

EXECUTIVE COMMITTEE

J. Y. Gerow, Washingtonville

William H. Manning, Saratoga

T. B. Wilson, Hall

C. Fred Boshart, Lowville

George W. Sisson, Jr., Potsdam

NEW YORK STATE AGRICULTURAL SOCIETY

AGRICULTURAL EDUCATION

Chairman, Dr. W. H. Jordan, Geneva, N. Y.

Dean A. R. Mann, Ithaca, N. Y.

Dean H. E. Cook, Canton, N. Y.

Charles S. Wilson, Commissioner of
Agriculture.

Dr. Augustus S. Downing, Assistant
Commissioner of Higher Education.

C. J. Huson, New York State Fair
Commission, Syracuse.

Jas. W. Wadsworth, U. S. Senator.

LEGISLATION

Chairman, C. Fred Boshart, Lowville, N. Y.

George W. Sisson, Potsdam, N. Y.

S. J. Lowell, Fredonia, N. Y.

J. A. D. S. Findlay, Salisbury Mills,
N. Y.

John N. Carlisle, Watertown, N. Y.

H. L. Wardwell, 71 Broadway, New
York City.

PUBLICITY

Chairman, H. H. Charles, 23 E. 26th St., New York.

H. B. Winters, Albany.

Dr. C. W. Burkett, American Agri-
culturist, New York City.

H. W. Collingwood, Rural New
Yorker, New York.

W. A. Johnson, The Field, 17 W. 42d
St., New York.

COOPERATION AND MARKETING

Chairman, J. W. Pincus, 174 Second Ave., New York.

J. J. Dillon, 202 Franklin St., New
York.

S. J. T. Bush, Morton, N. Y.

L. C. Tuckerman, Milton, N. Y.

F. N. Godfrey, Olean, N. Y.

Prof. W. A. Stocking, Ithaca, N. Y.

S. J. Cook, R. F. D. 10, Dunkirk,
N. Y.

Marc Cole, Albion, N. Y.

REVISION AND PREPARATION OF CONSTITUTION AND BY-LAWS

Chairman, George W. Sisson, Potsdam, N. Y.

Edward Van Alstyne, Kinderhook,
N. Y.

F. A. Taber, Poughkeepsie, N. Y.

MEMBERSHIP

Chairman, L. C. Tuckerman, Milton, N. Y.

W. N. Giles, Skaneateles, N. Y.

F. S. Welsh, New York City (Grand
Central Terminal).

H. B. Winters, Albany.

H. E. Cole, 36 State St., Albany.

F. R. Stevens, Geneva, N. Y.

TRANSPORTATION

Chairman, George N. Lauman, State College of Agriculture.

P. J. Burnett, Lehigh Valley R. R.,
Goshen, N. Y.

F. S. Welsh, Grand Central Terminal,
New York City.

R. W. Quackenbush, 3724 Grand Cen-
tral Terminal.

F. H. Thompson, Holland Patent,
N. Y.

C. W. Larmon, Albany, N. Y.

PRESIDENTS

1832	LeRay de Chaumont*	LeRaysville.
1833	LeRay de Chaumont*	LeRaysville.
1834	Jesse Buel*	Albany.
1835	Jesse Buel*	Albany.
1836	Archibald McIntyre*	Albany.
1837	John P. Beekman*	Kinderhook.
1838	John P. Beekman*	Kinderhook.
1839	Anthony Van Bergan*	Coxsackie.
1840	Anthony Van Bergan*	Coxsackie.
1841	Joel B. Nott*	Guilderland.
1842	James S. Wadsworth*	Geneseo.
1843	James S. Wadsworth*	Geneseo.
1844	John P. Beekman*	Kinderhook.
1845	Benjamin P. Johnson*	Albany.
1846	John M. Sherwood*	Auburn.
1847	George Vail*	Troy.
1848	Lewis F. Allen*	Black Rock.
1849	John A. King*	Jamaica.
1850	Ezra D. Prentice*	Albany.
1851	John Delafield*	Oakland.
1852	Henry Wager*	Utica.
1853	Lewis G. Morris*	Mount Fordham.
1854	William Kelly*	Rhinebeck.
1855	Samuel Cheever*	Elmira.
1856	Theodore S. Faxton*	Utica.
1857	Alonzo S. Upham*	Le Roy.
1858	William G. McCoun*	Syracuse.
1859	Abraham B. Conger*	Waldberg.
1860	Benjamin N. Huntington*	Rome.
1861	George Geddes*	Fairmount.
1862	Ezra Cornell*	Ithaca.
1863	Edward G. Faile*	New York.

*Deceased.

1864	James O. Sheldon*	Geneva.
1865	Theodore C. Peters*	Darien.
1866	John Stanton Gould*	Hudson.
1867	Marsena R. Patrick*	Sacketts Harbor.
1868	Thomas Hall Faile*	New York.
1869	Samuel Campbell*	New York Mills.
1870	Solon D. Hungerford*	Adams.
1871	Richard Church	Belvidere.
1872	Milo Ingalsbe*	South Hartford.
1873	Benjamin F. Angel*	Geneseo.
1874	Harris Lewis*	Frankfort.
1875	Alexander S. Diven	Elmira.
1876	Edwin Thorne*	New York.
1877	Patrick Barry*	Rochester.
1878	George W. Hoffman	Elmira.
1879	Horatio Seymour*	Utica.
1880	N. Martin Curtis*	Ogdensburg.
1881	Robert S. Swan*	Elmira.
1882	John D. Wing*	New York.
1883	George F. Mills*	Fonda.
1884	William M. White*	Canaseraga.
1885	James W. Wadsworth	Geneseo.
1886	James McCann*	Elmira.
1887	James Geddes*	Fairmount
1888	W. A. Wadsworth	Geneseo.
1889	James Wood	Mount Kisco.
1890	James Wood	Mount Kisco.
1891	O. B. Potter*	New York.
1892	O. B. Potter*	New York.
1893	J. B. Dutcher	Pawling.
1894	J. B. Dutcher	Pawling.
1895	I. P. Roberts	Ithaca.
1896	I. P. Roberts	Ithaca.
1897	Benjamin F. Tracy	New York.
1898	Benjamin F. Tracy	New York.
1899	Roswell P. Flower*	Albany.
1900	Timothy L. Woodruff*	Brooklyn.
1901	John H. Farrell*	Albany.

*Deceased.

1902	F. E. Dawley.....	Fayetteville.
1903	F. E. Dawley.....	Fayetteville.
1904	F. E. Dawley.....	Fayetteville.
1905	Gilbert M. Tucker.....	Albany.
1906	Gilbert M. Tucker.....	Albany.
1907	James H. Durkee*.....	Sandy Hill.
1908	James H. Durkee*.....	Sandy Hill.
1909	Raymond A. Pearson.....	Ithaca.
1910	Raymond A. Pearson.....	Ithaca.
1911	Raymond A. Pearson.....	Ithaca.
1912	George W. Sisson, jr.....	Potsdam.
1913	George W. Sisson, jr.....	Potsdam.
1914	John J. Dillon.....	New York.
1915	John J. Dillon.....	New York.
1916	F. W. Sessions.....	Utica.
1917	F. W. Sessions.....	Utica.

*Deceased.

CONSTITUTION

The style of this society shall be "The New York State Agricultural Society." Its object shall be to improve the condition of agriculture, the rural household and mechanic arts.

Section 1. The society shall consist of such citizens of the state as shall signify in writing their wish to become members and shall pay, on subscribing, not less than one dollar and annually thereafter one dollar; and also of honorary and corresponding members. The presidents of state associations actually working for the improvement of the various branches of agriculture, the presidents of county and town agricultural societies, or a delegate from each shall, ex officio, be members of this society. The payment of ten dollars or more, as fixed by the executive board, shall entitle the donor to life membership and shall exempt him from annual dues.

Section 2. The officers of the society shall consist of a president, nine vice-presidents, one to reside in each judicial district of the state, a secretary, a treasurer and an executive committee of eight additional members. The executive board shall consist of the officers above named; eleven members of the board shall constitute a quorum.

Section 3. The president shall preside at all meetings of the society and of the executive board. In his absence a vice-president shall be named by the meeting as presiding officer.

Section 4. The secretary shall keep the minutes of the meetings of the society and the executive board; he shall conduct all correspondence in behalf of the society.

The treasurer shall keep the funds of the society and disburse them on the order of the executive board, or a duly appointed subcommittee thereof, countersigned by the president of the society, and shall make a report of the receipts and expenditures at the annual meeting in January.

The executive board shall transact the general business of the society and shall perform such other duties as shall seem best calculated to promote the objects of the society.

Section 5. There shall be an annual meeting of the society on the third Wednesday in January, in the city of Albany, at which time all the officers shall be elected by a plurality of votes and by ballot.

The executive board shall have power to fill any vacancies which may occur in the offices of the society during the year. The society may be convened in special meeting by the executive board and fifteen members shall constitute a quorum. No person shall be qualified to vote at any election of officers of the society unless he shall have been a life member for at least thirty days prior to the holding of such election.

Section 6. No officer of the society shall receive any pecuniary compensation for services rendered to or for the society, except on the authority of the society granted at a regular annual meeting.

Section 7. The constitution may be amended by a vote of two-thirds of the life members present at an annual meeting.

PROGRAM

Tuesday, January 16, 1917

In the Assembly Parlor, 10 A. M.

Report of Committee on Agricultural Education

Chairman, DR. THOMAS E. FINEGAN, Albany

Report of Committee on Publicity

Chairman, H. H. CHARLES, New York City

Report of Committee on Legislation

Chairman, HON. C. FRED BOSHAET, Lowville

"Conservation in Relation to Agriculture"

HON. GEORGE E. PRATT, Conservation Commissioner, Albany

Appointment of Committees

2 P. M.

Report of Committee on Revision of Constitution and By-Laws

Chairman, GEORGE W. SISSON, JR., Potsdam

Report of Membership Committee

Chairman, LUCIUS C. TUCKERMAN, Milton

"A System of Direct Distribution between Producer and Consumer"

REV. DR. J. LEONARD LEVY, PITTSBURGH, Pa.

"Marketing Fundamentals and Cooperation"

LOUIS D. H. WELLS, Ph.D., Yale University, New Haven, Conn.

"The Fourth National Conference on Marketing and Farm Credit"

LEONARD G. ROBINSON, New York City

In the Senate Chamber, 8 P. M.

HON. CHARLES S. WILSON, Commissioner of Agriculture, Presiding

Address

HON. CHARLES S. WHITMAN, Governor of the State of New York

"Agricultural Interests and Education in Agriculture"

DR. J. G. SCHURMAN, President of Cornell University, Ithaca

"Work of the National Dairy Council"

M. D. MUNN, President, St. Paul, Minn.

Wednesday, January 17, 1917

In the Assembly Parlor, 9:30 A. M.

President's Address

Business Meeting

Report of Secretary

Report of Treasurer

Report of Committees

Election of Officers

Report of Committee on Cooperation and Marketing

Chairman, J. W. PINCUS, New York City

"Duty of State Legislators to our Agricultural Institutions"

DR. W. H. JORDAN, Director, Agricultural Experiment Station, Geneva

2 P. M.

"Work of the Wicks Committee"

HON. CHARLES W. WICKS, Sauquoit

"Is the Boycott on Eggs, Butter and Other Farm Products Justifiable?"

E. S. BAYARD, Editor, National Stockman & Farmer, Pittsburgh, Pa.

"What the Dairymen's League is Doing"

R. D. COOPER, President, Little Falls

7 P. M.

BANQUET, Stanwix Hall, Broadway

ANNUAL MEETING

**IN THE ASSEMBLY PARLOR, STATE CAPITOL, ALBANY, NEW YORK,
JANUARY 16-17, 1917**

TUESDAY, JANUARY 16

MORNING SESSION

The meeting was called to order by the President, F. W. Sessions.

THE PRESIDENT: We have made a little different arrangement of our program than at some of our annual meetings, and devoted more time to the making of reports by chairmen of the different committees. I feel that these reports should be interesting and that if we give greater opportunity for such reports they will grow even more interesting in the future. We believe that we have arranged a program that should be interesting to every one — not only to our members but to our friends who are not members, and who are always welcome at these meetings.

The legislative committee has done a great deal of work during the past year. Although they have not opposed or favored every bill that has been presented in the legislature, I believe that they have considered carefully every such bill and have taken action upon those that were deemed to be of real interest and importance. They should be very heartily commended for the result of their labors, and for the work that they have done. I would ask Mr. Boshart as chairman if he is ready to give us the report of that committee. He will report what has been done in regard to bills that have been introduced and will also make suggestions as to legislation during the present session. I should like each one here to feel that he has a duty to perform, part of that duty being the discussion of these recommendations of the committee. Let us have good, quick, active discussion, right straight from the shoulder.

REPORT OF COMMITTEE ON LEGISLATION, 1917

HON. C. FRED BOSHAART

Mr President and Gentlemen: We have come to a period in the agricultural advancement of this state that requires not only deliberate consideration of legislative enactments, but cooperation

of the many varied and diversified interests with our borders. Never in our history as a state have our people been confronted with the serious proposition of food distribution and food prices to the extent manifested during the year nineteen hundred and sixteen. Farm products, merchandise, goods, and commodities of all kinds and natures have doubled and trebled in value to such an extent that problems connected with the cost of living are approaching serious consideration. We have witnessed as never before a condition where vast interests are being pooled together and many products of the mill and the land are apparently being gambled and speculated in, to an extent that is becoming alarming.

It is but natural that, under a condition such as confronts us today, there will be presented for legislative consideration an almost endless number of legislative nostrums, intended to adjust, remedy, or correct defects in trade relations.

Consulting the "Legislative Index" of last year we find that under almost normal conditions of legislation there were introduced in the legislature sixty-seven bills affecting agricultural lands or agricultural interests generally. Seventeen of these sixty-seven suggestions were enacted in law, nearly half of which pertained to appropriations of moneys and the administrative functions of the department. Among the enactments passed and approved were: Chapter 125, Laws of 1916, containing new provisions regulating the manufacture of vinegar and relative to misbranding and adulteration; Chapter 135, relative to poultry foods, grain, grit, etc.; Chapter 144, which provided that unsweetened or evaporated milk not in hermetically sealed containers should contain at least 10 per cent of milk fats; Chapter 216, for serial numbering and registration of milk bottles and cans with the Department of Agriculture; Chapter 228 amended the agricultural law relative to licensing of commission merchants, by including "Live Stock" within the meaning of the term "farm products"; Chapter 322 enrollment or registration of stallions; Chapter 384, relative to the sale of adulterated milk; Chapter 586, establishing a bureau in the Department of Agriculture to promote settlement of emigrants and farm laborers within the state.

FIG. 2.—C. FRED BOSHART, CHAIRMAN OF COMMITTEE ON LEGISLATION



Bills that failed in passage amending the agricultural law were those relative to the control of the tent caterpillar; black knot pest; weeds and their destruction; pasteurization of skim milk and whey; guaranteed milk standards; inspection and branding of food products; reports by commission merchants; records of sales by commission merchants; adulteration and misbranding of foods; imitation butter and coloring matter; destruction of pure-bred cattle; slaughterhouse inspection; exchange of charitable institution products; and many others that never got beyond committees, though some of them had the approval of the Commissioner of Agriculture and the conference of agriculturists that met in Albany, December, 1915, to consider pending agricultural legislation.

Through the courtesy of Commissioner Wilson, a conference of the Agricultural interests of the state was called in Albany, December 20, 1916. The purpose of the conference was to consider changes in our agricultural law or new enactments, and whether or not they should be presented to the legislature.

The conference divided itself into three groups or divisions:

1. Animal husbandry group. This group was to consider the dairy law, the law relating to control of diseases of animals, and infectious or contagious diseases.

2. The plant industry group. This would include the apple packing and grading law, nursery inspection, insects and their control, fungi and their control.

3. Commercial relations, cooperation, and marketing constituted the third group.

At 3 o'clock the conference reconvened and considered separately the reports presented by the different groups and the following recommendations were adopted:

ANIMAL HUSBANDRY REPORT

That it is the sense of this division of the conference that in drafting a bill on animal diseases, such bill should include requirement for a mandatory physical examination of all dairy cows producing milk in the state of New York, to be used as whole milk or in dairy products.

That provision be made for veterinary service under regulations prescribed by the Commissioner of Agriculture, same to provide for some form of districting the state.

That we approve of provision being made by law for the general use of tuberculin under such rules and regulations as the Commissioner of Agriculture may determine.

The incorporation in the law of a provision for accredited herds, under rules and regulations to be prescribed by the Commissioner of Agriculture.

That it is the sense of this conference that the tuberculin test shall remain as the official test of the state.

That in the allowance by the state for indemnity, it be 40 per cent for generalized cases and 90 per cent for localized cases of tuberculosis of the appraised valuation, with a maximum of \$75 per head for grade and \$125 per head for pure-bred animals.

That it is the sense of this conference that a law should be enacted providing for the compulsory pasteurization of skim milk and whey from creameries and cheese factories and other plants giving back or selling back skim milk or whey from their factories.

That this conference request appropriations by the legislature of sufficient amounts of money properly to carry on the work of the Department of Agriculture.

That the general provisions of what is known as the Cristman bill, for the protection of certain domestic animals (from dogs) and the encouragement of the sheep industry, be recommended by this conference for enactment into law.

PLANT INDUSTRY REPORT

That the apple packing law of the state of New York be left in its present form — neither repealed nor changed.

That the Department of Agriculture continue its educational work that it did a year or two ago, (applying to all laws under the jurisdiction of the Department).

That a committee be appointed to draft a law to cover the packing of peaches, to go before the meeting of the State Fruit Grower's Association at Rochester and before the meeting of the Western New York Horticultural Society and get their endorsement.

That the Commissioner of Agriculture be asked to recommend the introduction of the proposed bill, as drawn by a special committee, appropriating \$8,500 to investigate the disease of beans.

That this committee endorses the proposition to declare the tent caterpillar a nuisance, subject to the jurisdiction of the Commissioner of Agriculture.

That a bill be drawn and introduced, in accordance with the Connecticut law, relative to protecting owners of farm lands against deer.

That a bill be drawn and introduced, giving a man the right, on his own premises, to use ferrets or other means of ridding his premises of rabbits.

That this committee recommend that a law be passed making it a misdemeanor for anyone to hunt on another person's property without first obtaining consent of the owner. (It was suggested that the last three recommendations be referred by Commissioner Wilson to the Conservation Commission with his endorsement.)

That this committee favor the adoption of a national mandatory apple packing law uniform in all states.

COMMERCIAL RELATIONS, COOPERATION, AND MARKETING REPORT

That the bond that shall be required by the Commissioner of Agriculture under section 55 of the agricultural law shall not be for less than one and one-half times the greatest amount of milk purchased in any one month.

That section 57 of this same law shall be amended so as to provide that if the Commissioner of Agriculture shall require an increase in the bond of any milk purchaser and if such milk purchaser shall not furnish such bond in the specified time, the Commissioner of Agriculture shall revoke the license.

That said section 57 shall be further amended to provide that when the Commissioner of Agriculture shall find any milk purchaser holding a license under the provisions of this act who shall be indebted to the person from whom he purchases milk, in a sum greater than the amount of the bond given, and the said milk purchaser does not increase the bond as requested by said Commissioner of Agriculture, the said Commissioner of Agriculture may revoke the license if issued.

That all persons who are testing milk for commercial purposes or for matter of public record shall be licensed, and for which license they shall pay the sum of \$1 to the Commissioner of Agri-

culture, and which license shall be revoked by him on evidence of failure to perform their duties satisfactorily, such license to be based on fitness and practical demonstration of the applicant.

That all dairy barns and premises of any dairy farmer who sells his product to a milk buyer, or a milk-buying concern, shall be scored and such score shall be used as a basis of settlement between the dairyman and milk buyers or milk-buying concerns, where the scoring is one of the considerations governing the price of milk. This recommendation was amended by the animal husbandry division as follows: That the veterinarian who was authorized to make the physical examination of the dairy cows, for detecting tuberculosis and disease should include in that inspection the scoring of the dairy barns and premises of the dairy farmer, as outlined above. The idea is to include in one inspection both recommendations.

That the Commissioner of Agriculture discontinue the publication describing farms for sale in New York State.

Since the agricultural conference in December, Supreme Court Justice Wesley C. Dudley has held that the apple grading law is defective and no conviction under it is possible, since it does not make violation of it a crime. This recent court decision is called to your attention as some further recommendation may be desired by members of this society.

SHEEP INDUSTRY

After reviewing the present prices of wool and mutton and facing the grave probability that the great war will entirely cut off certain sources of supply, it seems necessary that this society should recommend for enactment such legislation that would emphasize the need for encouragement to revive the sheep industry in the state.

Census figures show that in 1845, 6,376,000 sheep were in this state. The census of the Department of Agriculture made in 1916. shows 350,000 over one year of age, and 145,000 under one year. It also shows a total decrease from the census figures of June, 1910.

In 1909, 328,000,000 pounds of wool were grown in this country; in 1915 only 288,000,000 pounds, a loss of twelve per cent in seven years.

In the last fiscal year, out of a total of 591,015,495 pounds of wool available for consumption in the United States, foreign wool represented 300,000,000 pounds, or more than one half.

With an embargo on wool which is cutting off practically all our wool imports, we no longer can depend upon wool supplies from abroad, with the wool production for the whole world decreasing. The world's supply in 1915 was estimated at 2,836,000,000 pounds; in 1914, the estimate was 2,872,000,000 pounds; in 1913, 2,880,000,000; in 1912, 2,971,000,000 pounds.

With this state possessing several millions of acres of land better adapted to sheep farming than to any other purpose, this society recommends the passage of an adequate dog law; it also recommends that the Department of Agriculture conduct an educational campaign which will emphasize the importance and profitableness of the sheep industry under present conditions.

BULLETINS

In order to disseminate knowledge and to get valuable bulletins on live stock industry before the people, this society also recommends adequate appropriations to compile, print, and distribute such literature to farmers of the state.

APPROPRIATIONS

We recommend that sufficient appropriations be made for the agricultural institutions of the state of New York to bring them up to and maintain them at the highest standard of efficiency and that no appropriations be made for additional agricultural institutions until that highest standard of efficiency has been reached by existing institutions.

When one seriously considers that the present legislature is about to deliberate over probably the most important agricultural enactments presented to any legislature of New York State, this society cautions moderation.

The organization of a separate State Department of Foods and Markets is experimental. Instead of being weakened, the Department of Agriculture should be strengthened; it is bringing together units and solidifying them in one mass that gives strength to a structure. It is the sense of this society that in the Department of Agriculture of the state of New York should be centered

and controlled, unrestricted and unhampered, every agricultural unit within its borders, to build up and perpetuate — as its designers have laid out — a strong, integral part of our government.

THE PRESIDENT: I think we should feel ourselves deeply indebted to the legislative committee and its chairman for the splendid report which they have rendered. There certainly is a great deal of food in it for thought and for discussion. I would suggest first that a motion be made for the adoption of the report, and before a vote is taken upon that motion the report will be open for general discussion.

MR. SCHRIVER: I rise for the purpose of moving that we accept and endorse the report of the committee on legislation.

Seconded by Mr. Bush.

MR. F. R. STEVENS: I want to call attention to that portion of the report dealing with the bonds for produce dealers. There is a little misunderstanding in that matter. I think it was the intention of those present when that resolution was formed to provide that bonds for the produce dealer should cover one and one-half times the amount of his indebtedness. There has been some difficulty from time to time with our produce dealers in getting bonds to cover this work and it is very easy for a produce dealer in any commodity, in case he finds himself unable to file bonds sufficient to cover one and one-half times his monthly dealing, to pay every two weeks or twice a month, and so reduce the amount of his indebtedness. It was, therefore, the intention of the resolution, as I understood it, to cover one and one-half times the amount of his indebtedness at any one time and leave out the words "in any one month." Some of our people would pay every two weeks, or every week if necessary, and so reduce the amount of bond required.

MR. BOSHART: The resolution was adopted at the meeting on December 20, and I am pretty sure is an exact copy of the proceedings of that meeting.

MR. GEORGE W. SISSON, JR.: On that point, and speaking simply as a business man, if the milk buyers are not able and have not the capital to make their business secure for one month's purchase of milk from the farmers, we had better not encourage them by

reducing the amount of their bonds or shortening the time, as requested. If we provide for a two weeks' or a weekly payment for milk, that is getting down to a piker proposition in business, from my point of view. We have got to trust these people if they pay every two weeks. We are paid on the 15th of the month for deliveries during the preceding month, in my part of the state. I do not see any reason for encouraging the entry of people into the business of purchasing milk who have not the cash capital behind them to buy that milk.

MR. STEVENS: It was the intention, as I understand it, to cover one and one-half times the amount of his liability at any one time. Another question — I should like to ask if Mr. Sisson has had any experience with the smaller dealers and the difficulties they have encountered in getting bonds. You take, for instance, the man located in New Jersey who has within this state only a small building — all the building necessary, but small. It is placed, as oftentimes happens, in ground leased from the railroads, which makes the amount of value still less, and the amount of visible property that he has within this state is comparatively small. I know of many dealers who have had no difficulty in years of service in paying their bills, but who have had real difficulty in raising the amount of bond now required by the state.

MR. S. J. T. BUSH: I should like to inquire as to who is furnishing the money to do this business. I should like to inquire also if the law does not permit the securing of bonds from surety companies. For myself I should like to say that in my judgment any man who has not the standing in his community necessary to secure a bond required by this law, ought not to be permitted to be in the business at all. It is a very great mistake to reduce the amount and make it easier for irresponsible and dishonest people to handle the products of the producers of this state.

MR. SCHRIVER: I suppose, as a matter of fact, a great many of these small dealers have no standing in the local communities where they do business. I think that the idea of the law is absolutely to secure the milk producer against any contingency. No man can do any kind of business unless he has some capital that can be used if necessary. I know that a responsible man can get all the

bonds he needs for his business, by paying for them, and that is what the state requires. I believe that the report of the committee is right.

MR. ALBERT MANNING: The purpose of this suggestion by Mr. Stevens is not only to encourage and protect the small dealer in the amount of bond he shall furnish, but is also to encourage the larger dealers to more frequent payments. That is the one point we want to encourage — more frequent payments. By reducing the amount they are indebted in any one payment, they will reduce the amount of the bond required also, whether large or small. In any event the farmer has the same protection, because the dealer is required to furnish bond for one and one-half times the amount of his indebtedness, whether semimonthly or monthly.

THE PRESIDENT: There seem to be good arguments on both sides of the question. I presume as a general proposition any man that desires to go into business has the right and privilege and should be encouraged. But in seeking business the ordinary man comes in contact with the credit men of the houses from which he wishes to buy. Purchasers of milk do business on a different scale. Every individual farmer becomes a credit man for himself. I think we shall all agree that there are comparatively few farmers who have the executive ability or the information and knowledge that will permit them to become successful credit men. From that standpoint it seems to me that it was the duty of the state by proper legislation to protect them against themselves and also against those who would take advantage of the situation.

I want to add that any of these questions may be covered also by resolution to be handed in to the resolutions committee which will be later appointed. I ask each one in discussing these questions to be as brief as possible. There are other things covered in this report that need discussion.

MR. CLARK ALLIS: Referring to the apple packing law of the state of New York, it is far from being satisfactory in Orleans County. As time goes on the dissatisfaction increases, and not only there but in many other sections steps have been taken to bring about the repeal of this law. This would be a calamity because it is a long step in the right direction. There is one section of the law that the growers of Orleans County would like

amended. If this is the proper time I would like to offer such an amendment to be included in this report.

THE PRESIDENT: I would suggest that it be referred to the resolutions committee.

MR. BOSHAUT: I think there is much interest in this state in the apple packing law, both in the western part and in the Hudson River section. I would think it best before we put in any resolution on that subject to have a meeting of the fruit growers of the western part of the state with the fruit growers of the eastern part of the state; and I will tender my room, No. 229 at the Ten Eyck, for such a meeting immediately after the afternoon session.

MR. BUSH: That is very nice of Mr. Boshart, but it is absolutely impossible for the fruit growers to get together in a few hours and decide upon what ought to be done in this matter. The suggestion has been made that a committee be appointed from the New York State Fruit Growers' Association and also another from the Western New York Horticultural Society, composed of prominent growers who are vitally interested in this matter, to take it up and discuss it thoroughly, carefully, and impartially at considerable length, in order that we may come to an agreement in the matter. There is no objection on my part at all to meeting in Mr. Boshart's room, but we cannot decide in an hour or two what ought to be done in this thing, and there are a great many people vitally interested in this matter who are not here. These committees can meet here at some later date — come to Albany, meet at the Department of Agriculture, and as many as care to come can discuss this matter and discuss it thoroughly.

MR. CATCHPOLE: This matter will be taken up at the meeting of the Western New York Horticultural meeting to be held next week.

MR. BUSH: It will be taken up at that time and I think that is a better time than here.

THE PRESIDENT: I would suggest also that whatever is done along any of these lines be done promptly with any bills that are desired in order to avoid the position that some of us were in last

year — getting bills in so late that it was absolutely impossible to have them considered by the legislature.

MR. S. J. LOWELL: As a member of the legislative committee, I wish to make a statement relative to my position. Many of you no doubt have read the report given out by the governor's investigation committee, which has the endorsement of the Wicks' committee and the mayor's committee of New York. I signed that report and I believe in it. Therefore, I have to express with all frankness that I am not in accord with the idea of putting all the agricultural facilities in the control of one man. I believe at the present time it is altogether too much of a proposition. I feel that our report to the governor expressed our ideas very clearly. I could not with justice to myself and justice to the members of that committee subscribe to a measure exactly opposite. I want to make it very plain in order that there may be no mistake of my position, that I believe certain functions today in the hands of the commissioner should be placed under a different head. I believe it sincerely.

I have nothing to say of the tentative bill made out, because you gentlemen all know that in the formation of a bill changes are made and there may have been changes made in it that I know nothing of. I want to make myself plain that I do not subscribe to the idea at the present time that all the functions relative to agriculture should be vested in one man. I believe this is asking too much. I believe it is beyond one man. This does not give us one word of reflection against any commissioner of agriculture. Times are changing and business is growing, and we should plan wisely and well to take care of that business in the best possible manner.

THE PRESIDENT: You could move the adoption of an amendment, with that particular section excepted, if you desire. Afterward the adoption of that section could be moved by someone else and carried or defeated.

MR. LOWELL: I should be glad to make that amendment.

MR. SISSON: The closing paragraph of the legislative committee's report, which covers that point to which Mr. Lowell has

objected, was entirely new to me. I was out this morning and I do believe that this society should not commit itself to so sweeping a policy on the spur of the moment. I am inclined to agree with the position taken by Mr. Lowell. Our Department of Agriculture in recent years has gotten down to the level of a mere police department, to enforce the agricultural law. It has gradually reached out in other things to some extent, it is true, sometimes effectively and sometimes very ineffectively. To attempt to put this whole subject in the Department of Agriculture, it is a matter that needs a whole lot of study. I could not vote on its adoption intelligently. Perhaps it is a wise thing to do, but I have not decided as yet. I don't believe in too much machinery myself, but we are not prepared today in the present organization of our department to turn this whole subject over to that department and expect very good results.

I would second Mr. Lowell's amendment.

THE PRESIDENT: We will vote first on the amendment to the original motion excepting the last paragraph of the report in its adoption.

Carried.

THE PRESIDENT: Now the question is on the original motion as amended, which will read now that with the exception of the last paragraph, the report of the legislative committee be accepted and endorsed.

MR. F. R. STEVENS: I move to amend the report by substituting the word "time" in place of the word "month" in the first resolution under commercial relations, cooperation, and marketing, governing the bonding of produce dealers. It would then read that the bond shall be for not less than one and one-half times the amount of liability at any one time, whether two weeks, four weeks, or six weeks.

Seconded.

THE PRESIDENT: You have heard the amendment to the original motion. Are you ready for the question?

Carried by rising vote—11 to 7.

THE PRESIDENT: The vote will now be upon the original motion as changed by the two amendments.

Carried.

The committee on publicity do not claim, I believe, to have done so much work, but I happen to know that they have done a whole lot of work and that this society is indebted to Mr. Charles for a great deal of personal time and personal work, I know that you will be interested in his report, which may refer to the future as much as to the past.

REPORT OF THE COMMITTEE ON PUBLICITY

H. H. CHARLES

Owing to the lack of funds, this committee has been able to engage in no publicity except the publication of a booklet, entitled "History of the New York Agricultural Society." This is a neat and interesting pamphlet setting forth the achievements of the society in the past and its aims and aspirations for the present. We do, however, earnestly contend that the agricultural interests of the great Empire State stand in urgent need of wider and more aggressive publicity.

Advertising is today recognized as a great educational force. Again and again, it has proved a mighty power in community building. I need only to cite the successful use of advertising by the Canadian government in settling the bleak and wind-swept Northwest.

There is plenty of undeveloped and half-developed land in New York State needing only skill and energy to make it yield abundantly. There are tens of thousands of farmers in the Middle West looking for opportunities for profitable investment in low-priced farming lands. These men would make splendid citizens. They are trained farmers eager to adopt the newest and best methods. Tell these virile men the truth about New York's agricultural advantages as follows:

1. First in the number of dairy cows and in the value of dairy products, with 1,500,000 dairy cows producing nearly 600,000,000 pounds of milk annually.
2. Corn as good as the corn belt. Average production per acre

FIG. 3.—H. H. CHARLES, CHAIRMAN OF COMMITTEE ON PUBLICITY



— 36.2 bushels (1906–1915), compared with Iowa's average of 34.4 bushels.

3. First in hay production and in value per acre.

4. A climate well adapted for the raising of alfalfa, four cuttings a year and as high as 8 tons per acre having been secured in some of the live-stock sections.

5. A steadily growing poultry industry. New York is seventh in the production of poultry and eggs. The poultry show of the New York State Fair compares favorably with the famous Madison Square Garden Show.

6. Pasturage especially suitable for hog raising, with an abundance of skim milk in some of the dairy sections.

7. A tobacco crop to the value of about 14,000,000 pounds annually.

8. First in the growing of small fruit and apples. Annual value of the small fruit crop, \$2,500,000. Six counties of New York produce more apples than any state west of Missouri.

9. The greatest truck farming state in the Union. The annual value of the vegetable crop amounts to \$11,000,000; the potato crop, \$25,000,000; the bean crop, \$2,375,000; and the onion crop, \$1,066,000.

10. In the grain and hop crops New York ranks first in buckwheat and hops; fourth in rye; and sixth in oats.

The Empire State surpasses all others in population — 52 per cent living in New York City and less than 21 per cent on the farms. The ever-increasing demand for food forces the buying of enormous quantities of produce from the West and South. A greater part of these products can well be grown within the limits of the Empire State at great profit to our farmers. Transportation facilities are unequalled and we have the advantage of short hauls and low freight rates.

Much has been said and written of the so-called "abandoned farms" of the East. Yet these farms, when skillfully tilled and liberally limed and fertilized, can be made to yield big-paying crops. They can be purchased at moderate prices, and with the prevailing high prices of farm products in the East, will yield a high income on the money invested.

The school system of New York is unequalled. There is an

invigorating climate the year round. The natural drainage is excellent and pure water abounds everywhere. It would take volumes to enumerate all the natural advantages of New York State. But, I have shown enough here to demonstrate the great truth that New York needs agricultural publicity.

The slogan of a generation ago was: "Young man, go West." The appropriate slogan of today would be: "Young man, come East and buy a New York farm."

THE PRESIDENT: Gentlemen, these reports are just what we need. We should realize the importance of every statement that Mr. Charles has made. The backbone of business today, outside of the financial end, is advertising, and if we as a society are to accomplish work we must advertise that work. What is your pleasure in regard to the report?

The report was adopted.

THE PRESIDENT: Upon every farm, in every community, there is a waste which if conserved would add largely to the income of a farm or of a community. Conservation is an important subject and one that we should study carefully, and I feel that we are extremely fortunate in securing one so thoroughly qualified to speak upon the subject of conservation in relation to agriculture, as Conservation Commissioner George E. Pratt, whom I now introduce to you.

CONSERVATION IN RELATION TO AGRICULTURE

HON. GEORGE E. PRATT

Mr. Chairman and Gentlemen: It is a great pleasure to be here this morning and call to your attention the relationship between these two great departments — the Department of Conservation and the Department of Agriculture.

Conservation makes a different appeal to different people. In the eyes of the sportsman its chief function is that of preserving his hunting and fishing. To the mill owner its most important purpose appears to be that of safeguarding the sources of the streams whence his power is derived. The lumbermen, the hotel and boarding house proprietors, and the vacationists in the forest preserve counties find in conservation the means to preserve the

forest cover of the mountains from destruction. I might carry this analysis further, through practically every phase of our complex social and economic life, and prove at every step the vital influence that conservation exerts upon the welfare of the people. But you are agriculturists, and, though your interests and sympathies are broad, I prefer, in the short time allotted to me here, to emphasize the close relation between conservation and agriculture in the state of New York.

The jurisdiction of the Conservation Commission, as defined and limited by law, covers the forests, water in the streams, and wild life. The commission is charged also with the conduct of the St. Lawrence Reservation, the Cuba Reservation, the John Brown Farm, and the state reservation at Saratoga Springs, which are very important activities, though not of immediate interest to you at this meeting.

It is common to think of a forest as a very large tree-covered area, extending for miles, or even for hundreds of miles. The smaller areas, however, are none the less forests, even the woodlot presenting its problems of forest management for solution by the trained forester. Whether woodlot or trackless wilderness, the forest is of indispensable value to the farmer. Its first and most obvious use is in the direct utilization of the trees for lumber, fences, fuel, and all the other manifold purposes for which wood in some form is necessary. The total consumption of wood in the state, exclusive of wood for fuel, according to figures compiled in 1913, is more than 1,750,000,000 board feet, of which more than 1,200,000,000, or more than 66 per cent, come from without the state. No other figures than these are required to make us realize the great commercial value of our standing timber and the necessity for devoting as much of our idle land as possible to intensive timber production.

Forests have another value for the farmer, which, though indirect, is as important as the timber that they produce. They are regulators of climate and conservers of water supply, and as actual inducers of rain they are of tremendous agricultural benefit. Regions of extensive tree growth are cooler in summer and warmer in winter, with smaller sudden fluctuations in temperature, than other barren sections of similar location. You all know that mois-

ture-laden winds from the oceans or from large inland bodies of water sweep onward over the land until they strike the cooler currents of wooded areas. Their moisture is then precipitated as rain, which falls over wide areas of forest and farm land. In this respect New York is most fortunately situated, drawing rain from both the Atlantic Ocean and the Great Lakes. Within the state are high mountains and extensive forests, whose influence upon precipitation has been measured and verified, while to the east in the New England States, are broad, forested, and mountainous areas over which the Atlantic winds are cooled so that their burden of rain is dropped upon the entire extent of the state.

In conserving the rain that has fallen, the forests render a further service to agriculture, irrespective of their size. The ground under the trees is covered with the accumulated debris of years or of centuries. This is the duff — the carpet of the forest floor. It serves two purposes, by preventing rapid evaporation of ground water when dry winds sweep over the land, and by acting as a sponge to hold the rainfall and control the run-off. In the arid regions of the West the rain runs down the creek beds like water from a shingled roof, and soon after the rain has ceased the ground is as dry as before. You know in China, where they have cut off practically all of the trees in large sections, they have tremendous floods in certain seasons of the year and their hillsides are entirely swept off. Only last week I heard a man just back from China make a statement that a graduate of the Yale School of Forestry is endeavoring to educate the people to plant trees. It is a very hopeful sign for China that they are starting that work over there. The people in China are awakened to the fact that they must conserve their forests in order to conserve their agricultural areas.

We have only to study our own Empire State to appreciate the difference which the forests make. Even outside of the Adirondacks and Catskills, in the farming sections, the spring sources of the brooks are most commonly in the wooded sections. The great rivers of the state are forest-born, and their bottom lands provide the most fertile acres that we have.

The forests equalize the flow of the streams, reducing floods in the spring or after heavy rains, and providing a steadier flow in

FIG. 4 — HON. GEORGE D. PRATT



the summer. The deep snow of winter melts more slowly under the trees, and the run-off is more gradual.

As a refuge for wild life, particularly for birds, the forests are of absolutely indispensable value to the farmer, whether they occur in large areas or in many scattered woodlots. Without birds, insects would multiply unchecked and agriculture would come to a standstill. I shall return to this subject in a few moments.

Another value of the forests, a value too much overlooked, or rather not sufficiently appreciated in rural communities, is their value for recreation purposes. Our Adirondack and Catskill mountains have become the greatest vacation grounds in the state, and in all the farming country scattered through them and lying around their outskirts the business of caring for summer visitors and supplying them with farm produce has assumed great importance. In other parts of the state this is true only in lesser degree. The woodland constitutes one of the chief attractions of the country. The sportsman finds his game in the woods, and all classes are turning to them more and more for relaxation. This is particularly true of rural schools, which use them increasingly for recreation and instruction.

All of these values of forest and woodland assume increasing importance in our minds when we consider that the best information available shows that the forest and woodlot area of the state is approximately twelve million acres, or nearly forty per cent of the total net land area of the state. Much less than one-half of this wooded area is in the Adirondack and Catskill regions, which we think of as the forest sections of the state. To this twelve million acres may be added waste or other land, probably three million acres, some of it now used for farming, but which is better suited for forests, making a total of 50 per cent of the state which should be under careful forest management. More than one-half of this is outside the Adirondacks and Catskills. It surely is of vital concern to the farmer.

In all this wooded area, that is, in one-half of the land area of the state, the Forestry Department of the Conservation Commission is actively interested. It administers over the entire Forest Preserve, and is besides charged with the protection against fire of all of the forest in the Adirondacks and Catskills. For this pur-

pose it has developed a most carefully organized force of rangers and observers, whose work is saving the state millions of dollars. In addition a system of state-wide forest fire prevention was instituted last year, by act of the legislature, in accordance with which the commission may institute a proper protective system for any area of forest land of more than seventy-five thousand acres. The state-wide forest fire prevention comes close home to many rural communities. Last year the fire fighting cost the state less than \$5,000, which is considerably under what it has ever cost the state before. This means that there have been saved to the state millions of dollars of loss which occurred in previous years, on account of the lack of inspection and lack of fire observation.

Reforestation of waste and denuded land is the quickest and surest method of bringing it under forest growth, and in many cases the only method. For the production of forest trees of planting size the Conservation Commission operates five nurseries, located in different parts of the state. Thirty million trees are growing in them at one time, and the annual production is approximately ten million. About three million are planted upon state land, while the balance are available for private purchasers at the cost of production.

That reforestation of idle private land has taken firm hold upon the people of the state is evident in the steadily increasing number of these trees that are purchased. Many of them are taken by farmers. Schools are planting more each year. Last year just prior to Arbor Day, working in conjunction with the Department of Education, we advocated that the school children plant trees in sections of the state where the towns had areas that belonged to them, and we sent out thousands of trees to different communities in order that they might reforest those denuded areas. In that way we got the children interested in reforestation and also in the protection of the wild forests. Cities and towns are reforesting the slopes of their municipal water sheds, and communal forests are being established in many places. The sides of many country highways are now planted with trees from the commission's nurseries.

The returns are beyond question. Four-year-old transplants are sold as low as \$4.50 a thousand. This is nearly enough

trees for an acre, as an acre will take about 1200 trees. They can be planted for not to exceed \$4, making the total cost for reforesting an acre of land not more than \$9, and often much less. In forty-five to fifty years the stumpage value will range from \$350 to \$450. If it is argued that this is a long time to wait, it can be answered that the growing crop of trees increases the sale value of the property almost from the start. The planting of windbreaks on farms increases their value even in a few years. In Kansas this sort of planting has worked a complete transformation in the character of the country.

In the management of woodlots and other forested areas the Conservation Commission gives much valuable assistance. The advice of the foresters of the department is always available, and frequent advantage is taken of it. The commission further issues a number of publications on phases of forestry that are of practical interest to farmers.

At this very time the state of New York is facing a forestry problem which is of vital interest to every farmer. You have probably read of the white pine blister rust, which has gained a foothold in the state, and which threatens practically to exterminate our white pine, unless it is checked. The spread of the blister rust is from the white pine to currants and gooseberries, and from them back to the pines. The remedy, accordingly, is to destroy all currants and gooseberries around infected centers — to make a clean-cut choice between white pine trees and gooseberry jam. Thus conservation becomes of close concern to the farmer's wife as well as to himself.

I need not dwell long upon the relation of stream control, water storage, and water power to the farmer. The direct benefits are clearly enough apparent. We have in New York water power enough, when fully developed, to supply every power and lighting need. Much of this already reaches out into the country districts, through lighting circuits, power circuits, and trolley lines. There is an indirect benefit to the farmer, moreover, in the development of industrial centers because of available power, thus providing a ready market for all farm produce. The interlocking of interest between the farmer and his town and city market is fundamental, and equally fundamental is the concern of conservation with the

safeguarding of stream flow and the development of hydroelectric power.

The drainage of swamp lands, that they may become productive, is one of the duties of the commission. Many large swamp sections have been surveyed and plans made for the drainage of some of them. The straightening of Canaseraga Creek in the southwestern part of the state, in order to reduce destructive floods, and the draining of the bottom lands along its bank, work that is now completed, has resulted in greatly increased crops and in tremendous increases in the property values. The fertility of swamp lands is well understood by farmers, and many of them drain small swamp sections of their farms. Where the areas are too large for private initiative, the Conservation Commission will take hold.

When we turn to the subject of wild life conservation, the point that must take first place with the farmers is that of preservation of the birds. Birds are destroyers of insect life, and we know to our cost that without some check upon the ravages of insects, agriculture would be totally impossible. Dr. William T. Hornaday, in his book on "Our Vanishing Wild Life," has put the whole situation in a nutshell. He says: "The logic of the situation is so simple a child can see it. Short crops mean higher prices. If ten per cent of our vegetable food supply is destroyed by insects, as certain as fate we shall feel it in the increased cost of living." Then, taking up different farm crops, one by one, Dr. Hornaday points out the damage that is caused to each. In the case of corn alone, he cites about fifty important species of insects which destroy or materially reduce the quality of the corn crop. The corn-root worm alone is responsible for a loss each year of 2 per cent of the corn crop, or \$20,000,000. Other insect pests bring the damage to the corn crop up to 8 per cent of the total production, or a loss each year to the farmers of the country of \$80,000,000. I might carry this analysis of insect damage on through all the various farm products, and show a total loss from insects of more than \$795,000,000, based on figures prepared by the United States Department of Agriculture.

Birds are the greatest enemies of the insects, and are in fact the only agency that we may employ on a large scale against insect life with any hope of success. Dr. Hornaday says: "In view of

the known value of the remaining trees of our country, each woodpecker in the United States is worth \$20 in cash. Each nuthatch, creeper, and chickadee is worth from \$5 to \$10, according to local circumstances." All of the woodpeckers feed on the codling moth and curculio, insects so destructive to apple trees that it has been estimated that more than \$8,000,000 is spent each year for sprays, labor, and apparatus in the fight against them. Thirty-four birds in all devour the codling moth, and these thirty-four birds make apple orchards possible.

Almost all of our birds are insectivorous at some period of their life, and most of them feed on insects continually. In addition they are great destroyers of weed seeds. The quail, that bird which we must now take vigorous steps to preserve in New York State, preys upon grasshoppers and locusts, leaf hoppers and plant lice, moths, caterpillars and cut worms, flies, beetles, ants, wasps, slugs, bugs, and other insects, to the grand total of 145 species.

You know that the Conservation Commission operates three game farms for the purpose of stocking the covers of the state with ring-necked pheasants. Quite aside from the value of this work to sportsmen, it is of tremendous advantage to the farmer, because the pheasant is in every way as destructive to insect life and to weed seeds as is the quail. This is so true that, where pheasants most abound, as in the neighborhood of the game farms, where they are allowed to run loose, potato bugs have practically disappeared. That farmer who will liberally stock his farm with ring-necked pheasants may be perfectly sure that the destruction of his crops from potato bugs and other insects, will be materially reduced.

All of the insectivorous birds are protected by state law, and, since most of them are migratory birds, they are protected as well by the Federal Migratory Bird Law. The Conservation Commission feels that the enforcement of the state law protecting these birds is one of its most important activities, and the game protectors are constantly on the alert to detect violations of that law. In fact, a large portion of the cases turned in by protectors each year are cases relating to the destruction of such birds.

Farmers can assist in increasing the birds. In winter they can place suet in trees and scatter a little grain for those species which

do not migrate, and which have a hard time during the winter months; and in summer they can erect bird houses to attract the birds to their property. This is a work that will well repay them in the protection of their farm crops.

Another work, one that has never received the serious attention that it demands, is the eliminating of superfluous cats. Figures on the destruction of bird life by cats are appalling. The insectivorous birds that cats kill in a single year in New York run into the millions. I shall not dwell upon this subject, because another speaker is to cover it in complete detail. I wish to say, however, that one of the most important steps in conservation that can be taken at the present time, so far as the farmer is concerned, is that of a system of licensing cats in order that the unnecessary and vagrant cat may be eliminated.

You farmers realize the value of game in general as a means of sport and as a food supply for country residents. It is also one of the chief means of attracting vacationists. As a source of revenue, game farming is now coming rapidly to the front, and within the next ten or fifteen years we shall come to see it firmly established in New York State, either as the sole business of the farmer or as one of his remunerative side issues. By proper attention to methods, game can be made one of the important by-products of the farm without in any way interfering with productivity along other lines.

Conservation is concerned with the fur-bearing animals, and here again it touches the interest of the farmer. The value of the fur crop in the United States runs into millions of dollars. In the winter months, the farmer or farmer's boy traps during his spare time. Even the much-abused skunk has become so valuable for his pelt that he is worthy of careful protection, and does indeed receive it. In fact, the skunk is one of the most valuable fur-producing animals in the state of New York. The Biological Survey of the National Government is now engaged in experimental work in fur farming in the Adirondacks, for the purpose of working out the most successful methods for this section of the country, and we may expect that in future farming of this sort, of the proper kind, not characterized by the extravagance of the fur-farming boom, may become a more important phase of our farm life.

What I have said about the value of game for the farmer applies equally as well to fishing, and in many cases to an even greater extent. The state operates eleven fish hatcheries and the annual value of the fry and fingerlings that they produce exceeds \$200,000. All of this product is planted in the public waters of the state, where its ultimate value in keeping up the fishing in the streams and lakes runs into many millions of dollars. In this work the Conservation Commission needs more earnest cooperation from the farmers. The fish are sent out to applicants, and we have found by study of the situation that many sections of the state are entirely neglected, because no applications are received from them. We are endeavoring, by educational work and other methods, to obtain this cooperation. Aside from the fish in the public waters, the farmer can operate his own fish pond. Cornell University has published a special bulletin upon this subject, which is well worth the attention of every farmer who wishes to increase his supply of fish food, or to make the production of fish a profitable side issue.

There are many other phases of conservation of equal importance in the welfare of the state. Those that I have outlined, however, are the ones of most direct concern to agriculture. I trust that I have shown the need for hearty cooperation with the Conservation Commission on the part of the farmer, not only for the benefit of our own generation, but for those to come.

THE PRESIDENT: Mr. Pratt, I wish to thank you for your splendid address. Your address has been very instructive, and I know that we have all appreciated it very highly indeed.

I should like to ask the privilege of changing our program to some extent and as our report from the committee on agricultural education cannot be heard this morning, I shall ask if Mr. Tuckerman as chairman of the committee on membership is ready with his report. I believe that this a very important matter for us to consider, for one of the things we need is membership. We need the support of every one in the state of New York interested in agriculture.

REPORT OF THE COMMITTEE ON MEMBERSHIP

L. C. TUCKERMAN

As soon as possible after its appointment, the committee met in Albany, jointly with the executive board. At that time President Sessions outlined ideas that he had been going over with other members. It is due to Mr. Sessions that these ideas have taken shape.

In common with those men in this state who have given the most unbiased thought to its affairs, Mr. Sessions has realized the growing necessity for a great extension in the activities of this society. To do that means increased membership as the first premise, for only through membership can the necessary funds be secured.

Your president proposed a new class of members in addition to those we already have, to be known as endowment or sustaining members, whose dues should form a permanent fund, only its income to be used for the work of the society.

Realizing that something more than talk would be needed, your secretary, Mr. Cole, undertook the arduous task of preparing a booklet covering the history of the society. And I want to thank Mr. Cole for his generous efforts, which required much research and time. This pamphlet was submitted to Mr. Charles, chairman of the committee on publicity, for criticism and suggestion. As the society did not have sufficient funds to pay for printing and necessary expenses of this work, the executive board authorized the membership committee to secure subscriptions from interested persons for this purpose. To start the work Mr. Sessions generously pledged \$100 and others contributed enough to bring the fund up to \$350. Your president further met expenses in New York amounting to at least another \$100.

You all know that this society was shorn of its important functions connected with the State Fair, but perhaps you do not know that its valuable and interesting collections of agricultural exhibits were also taken from it, and have since been unavailable. We want to see these collections restored to the custody of this society that they may again become of use and value, for one thing. We also want to see this society placed in so independent and secure a position that it can do the work which only the New York State Agricultural Society can do.

**FIG. 5.—LUCIUS C. TUCKERMAN, CHAIRMAN OF COMMITTEE ON
NOMINATIONS**

III—18



Conditions in this state are being daily so shaped that it is imperative that the society act at once. Every hour that passes now puts us in a worse position.

The farmers of New York State are not only producers, but we are all consumers as well, and of more than the average. We are in a better position from the very nature of things to judge of both ends than any other class of people in the state.

Commissioner Pearson proved to the country at the Western Boosters' Show in Madison Square Garden, held during his term as commissioner of agriculture, that the farmers of New York State are second to none in their ability to produce crops. But the farmers of other states, whose profession is conceded to be the backbone of the prosperity of the state, have gone far ahead of us in their ability to take care of themselves as citizens and taxpayers. In Connecticut it has always been the farmers that have determined what was best for the general welfare. And last year Minnesota and North Dakota decided to take the bull by the horns, and the farmers now control their state governments. But our New York farmers do not as a rule take kindly to political management, seeming to prefer to leave their welfare in the hands of professional politicians.

With this attitude in mind, let me draw your attention to the New York State Automobile Association. By means of an active, enthusiastic membership the association is not only able to attend to and pay for such matters as the placing of road signs on all our highways, to the benefit of every user, but also to maintain efficient counsel in Albany to watch proposed legislation, strenuously opposing the bad, of which there is much, and aiding the good. Last year at the summer meeting it was determined to take the lead in such legislation by preparing automobile bills based on common sense and the needs of the people. These bills were drafted and submitted to every member for comment and suggestion and taken up in detail at the annual meeting in November. They have had the benefit of the best thought of many minds and wide discussion among people who know a method vastly superior to the haphazard, ill-considered, or special-privilege way in which most of the bills presented to our legislature are drawn; and the legislature will undoubtedly enact these bills into law. If you will do as we now

urge you, this society can render the same sort of invaluable service to the people of the state.

There are proposals coming before the legislature here in Albany this year that are ghastly to think about. The officers of this society will give their time and best efforts to stem the tide, but they cannot do it alone.

The venerable position of this society, its dignity, and its form, make it the natural rallying point for the farmers in every branch of the industry.

On behalf of the incoming committee on membership I beg of every man here and every member unable to get here today, to pledge himself earnestly and sincerely to the task of securing new life and endowment members and to get each new member to do the same. If you will do this, you will soon see the New York State Agricultural Society back in the commanding position for good that it should hold. Remember that you will not only be caring for your own interests as farmers, but for the interests of the great body of consumers of the state to which you belong. The time and effort that you give to this work will be paid to you many times over by the results.

The committee on membership will do all that it can, but it must have your help. President Sessions and Secretary Cole and others have given generously of their time and money and labor to make the way easy, and will continue to do so. Will you give them their reward by enthusiastic help?

THE PRESIDENT: I want to say to you, gentlemen, that I had no idea that reference to any contribution was to be referred to in this report. The chairman of your membership committee modestly refrains from stating that he himself contributed to that special fund an amount equal to that contributed by anyone else. There were others also who contributed to this special fund to enable this work to be done without depleting the society's treasury.

What is your pleasure with this report?

The report was adopted.

THE PRESIDENT: I wish to announce the appointment of committees at this time. It has been customary to have a nominating

committee and as that committee I would appoint the following: George W. Sisson, jr., Chairman; Jas. A. D. S. Findlay, L. C. Tuckerman, W. N. Giles, and C. Fred Boshart.

On the resolutions committee I appoint Gilbert M. Tucker, Chairman; Dean H. E. Cook, Hon. T. B. Wilson, Albert Manning, and S. T. J. Bush.

On the auditing committee I appoint Professor W. A. Stocking, jr., and Hon. F. N. Godfrey.

I know of no provision for the appointment of a committee that I think should be appointed, and I deem it to be within the province of the president to appoint this committee. If there is no objection on the part of the society I should like to appoint a committee on publication of transactions, addresses, and business of this meeting. If there is no objection I should like to appoint as such committee: Hon. Charles S. Wilson, Commissioner of Agriculture, Harry B. Winters, Treasurer, H. E. Cole, Secretary.

We will let this conclude the morning session, and I thank you for your attention.

AFTERNOON SESSION

Meeting called to order by President Sessions.

THE PRESIDENT: Gentlemen, with your permission we shall make some changes in our program. We have a very important subject upon which one of your committees has been working during the year, and we shall enjoy listening to the report. Instead of waiting until tomorrow, as I fear that the morning will be very much needed for our business session, I shall ask this committee to give us their report today. That is the report of the committee on cooperation and marketing. I should like to have the report of this committee and it will be followed by an address along similar lines. I will call on Mr. Pincus, chairman of that committee, for his report.

REPORT OF COMMITTEE ON COOPERATION AND MARKETING**J. W. PINCUS**

Mr. President and Gentlemen: As chairman of the committee on cooperation and marketing, I have been requested by our worthy president to submit a brief report.

Our committee held one meeting last August in Albany, at which the majority of the members were present. It was suggested at that meeting that all other committees, as well as the committee on cooperation and marketing, should present reports at the annual meeting of the New York State Agricultural Society, and that an opportunity should be given to discuss these reports.

As our committee has not really done any active work in either marketing or cooperation, it was suggested that in presenting this report, I should give a brief review of the progress made in cooperation and marketing in the United States and particularly in New York State, I have accordingly gathered some interesting facts and figures about the progress of cooperation and marketing in this country.

While the subject of cooperation and marketing has been talked about from time immemorial, and some people think the subject has been "talked to death," the past year has shown more actual achievement in the field of cooperation and marketing than in any previous years in the history of the United States.

FEDERAL FARM LOAN ACT

The past year saw the signing by President Wilson of the Farm Loan Act creating the Farm Loan Board and twelve banks which have recently been located, and which will probably open their doors within the next few weeks. While there may be differences of opinion as to the value and practical working out of the Federal Farm Loan Act, no one can help but admit that this is the first really constructive effort to solve the rural credit problem in this country, and it marks a new epoch in the development of agriculture in this country.

While thus far very little interest has been shown in the Federal Farm Loan Banks in this state, it is interesting to note the situation in North Carolina, as described by Professor William R. Camp as follows: "As a result of our educational campaign in

**FIG. 6.—JOSEPH W. PINCUS, CHAIRMAN OF COMMITTEE ON Co-
OPERATION AND MARKETING**

the last four months we have formed 57 National Farm Loan Associations, which applied for \$2,445,725 in loans, and individual applications were made for \$699,325 more."

NATIONAL AGRICULTURAL MOVEMENTS

The fourth annual conference on marketing and farm credits held in Chicago, December 4-9, 1916, had nearly two thousand persons in attendance, representing 120 farm organizations. At this conference, a permanent organization known as the National Agricultural Organization Society was formed. It will work along the same line as the Irish Agricultural Organization Society, and will make an effort to promote cooperation among farmers in this country.

In Washington, the Farmers' Non-Partisan League, with its affiliated organizations, Rural Credit League of America and National Marketing Committee, is doing excellent work under the guidance of George P. Hampton.

During last year, another national organization was formed in New York State under the name of National Agricultural Society, of which former Secretary of Agriculture James Wilson is president.

MILK STRIKES

During last year there was an epidemic of milk strikes. The milk strikes in Chicago, New York, Boston, and other large cities of the East and West demonstrated that the farmers will stand together when pressed hard. The excellent work of the Dairymen's League in New York State is beginning to bring fruit in other states. As we shall undoubtedly hear in the course of this meeting of the work of the Dairymen's League, I shall just mention its reflex action in other states.

On Saturday, December 30, in every county seat of the six New England states, there were held enthusiastic meetings of hundreds of milk producers for the purpose of organizing a New England Dairymen's League. I had the pleasure of attending some of the preliminary meetings in Connecticut, and I saw how large dairy companies operating in New England came down and accepted the farmers prices of six cents, and while the increase in price of one cent over last year is quite a factor, the most important point is

that for the first time in the history of farming in this country, the farmers had their say in fixing prices on products which they produce. Heretofore, the farmers had to await the pleasure and dictation of prices of the buyers.

MARKETING MILK AND DAIRY PRODUCTS

This wonderful demonstration of the farmers in the various parts of the country simply showed that the farmers could not stand the abuses any longer.

In our state, thanks to the effort of Mr. John J. Dillon, commissioner of the Department of Foods and Markets, an agitation for better marketing of milk and dairy products was started last year. Largely as a result of this agitation, the legislature appointed the Wicks' Investigation Committee, which during the last year held a number of meetings in this state, and of the work of which we shall undoubtedly hear in the course of this conference.

MARKETING AND COOPERATION IN OTHER STATES

It is interesting to note the marked progress in cooperative work in many eastern and southern states. Mr. Embree reports that the Farmers' Union of Maine, after four years' growth from "nothing," has 84 local unions, with 14 warehouses for potatoes, 42 grain houses, 6 grocery stores, and a wholesale grain house; a distributing house in Boston; and a selling agency in New York City. It did over one million dollars' worth of gross business last year, and saved in cooperative buying of fertilizer alone about four hundred thousand dollars.

The state of Massachusetts has also made considerable progress during the past year. I quote the following from the letter of Professor E. F. Damon, who has charge of cooperative organizations and marketing under the extension service of the Massachusetts Agricultural College:

We have organized 13 new exchanges, all of which have been incorporated and are doing a splendid business. As near as I can find out, our organizations are as follows:

Cow-testing	4
Breeding	1
Creameries	8
Credit unions	44
Stores	46
Purchasing farm supplies	15

Marketing

Milk	3
Apples	4
Blueberries	1
Strawberries	4
Onions	1

Total	131
-----------------	-----

As for the amount of business done by these associations, I estimate

Supplies purchased	\$200,000
Products sold	1,500,000

In Connecticut, Professor H. J. Baker, director of the extension service, reports that there are 8 cooperative organizations incorporated, and 21 loosely organized.

In New Jersey, a special man to look after marketing has been recently appointed by the reorganized state board of agriculture. This man is to have an office in New York City as well as Trenton, New Jersey, to assist in every possible way New Jersey farmers in the marketing of their products.

In North Carolina, a special division of markets and rural organization has been created in connection with the North Carolina Agricultural Experiment Station and Extension Service, of which William R. Camp is chief. I quote the following from a letter recently received from him:

We have helped farmers to organize, and furnished a manager to manage the association for the first year. In this way we demonstrate the value of cooperative marketing. We find that, if a farmers' organization is successfully maintained by us one year, it can look after itself thereafter, with such general assistance as is furnished by this office.

This year we offered to grade cotton for any county that would appropriate three hundred dollars. As a result of this offer we are grading cotton at seven grading offices for the farmers in twenty-one counties. Last year we found that farmers who knew the grade of their cotton before selling it were able to get on an average \$1.15 a bale more than farmers obtained for the same grade on the same date who did not know the grade of their cotton.

FEDERAL DEPARTMENT OF AGRICULTURE

The Office of Markets and Rural Organization made a survey of state marketing activities and reported in June, 1916, that there were fourteen states having official state marketing departments, most of them established within the last two years, and that five states are to pass necessary legislation during the coming year to establish such departments.

The limited time at my disposal does not permit me to relate the splendid progress made by the Office of Markets and Rural Organization, which started in 1913 with a modest appropriation and small staff, and which at the present time has an appropriation of nearly two hundred thousand dollars and employs a large staff of experts. According to the report of Charles J. Brand, chief of the bureau, the work was conducted last year along four different lines, as follows:

1. Marketing and distributing of farm products.
2. Rural organization investigations.
3. Investigations and demonstrations of cotton standards and cotton testing.
4. Enforcement of the United States Cotton Futures Act.

COOPERATION AND MARKETING IN NEW YORK STATE

Land Bank of the State of New York

I am glad to report that the Land Bank of the State of New York is making progress. According to the figures of E. F. Howell, managing director of this bank, the Land Bank, which started its operation in 1915, has a capital of \$105,000 and it has issued and sold \$350,000 worth of Land Bank bonds — \$50,000 in 1915 and \$300,000 in 1916. Out of the 250 savings and loan associations in the state, only 46 belong to the Land Bank and only 22 avail themselves of the lending power of the Land Bank. These associations placed altogether 175 mortgages amounting to \$517,600 as security for the Land Bank bonds with the State Comptroller. Out of the 175 mortgages only 24, amounting to \$189,250, were on farm properties and 151, amounting to \$428,350, were on homes of city artisans.

The Land Bank bonds were purchased by the largest savings

banks and trust companies in New York City at the rate of 4½ per cent and their proceeds net the association 5 per cent.

COOPERATIVE CREDIT UNIONS

In 1913 the Cooperative Credit Union Law was placed on the statute books of New York State. According to the report of the New York State Banking Department there are thirty cooperative credit unions authorized to do business in New York State, and out of them fourteen were organized during last year. Out of the thirty cooperative credit unions, all except five are located in cities, and the only five rural organizations are those organized by the Jewish farmers in this state.

DEPARTMENT OF FOODS AND MARKETS AND BUREAU OF COOPERATION

In 1913, besides passing the Land Bank Law and the Rural Credit Law, the legislature passed a number of other very important bills for the promotion of cooperation and marketing. Among them was the establishment of the Department of Foods and Markets and the Bureau of Supervision of Cooperative Associations. I am sorry to report that the high hopes and expectations that the passage of these important legislative measures were to bring about have not materialized, and that cooperation and marketing in this state has not made as much progress as in other states.

The Department of Foods and Markets under Commissioner John J. Dillon has been very much handicapped on account of its very meager appropriations. Although it has rendered splendid services to the dairy farmers of the state in adjusting milk prices, it has not been able to do many of the things which the law so generously permits it to do.

The Bureau of Supervision of Cooperative Associations was established in 1913. According to the statute of the state of New York, this bureau is still in existence, but no appropriation was made for it during the last two years. While a number of people in the state suspected that this was due to some concerted effort of a number of middlemen, the truth did not come out until the Wicks' Investigation Committee held its hearings in Utica and found that the New York Feed Dealers' Association, according to

the sworn testimony of their officers, "was able to put the cooperative bureau at Albany out of business." To a question put by Judge Ward, "How did you get rid of the bureau?" the answer given was, "Politically. We had the appropriation smothered."

Efforts were also made by the same association to withhold appropriations from the State Department of Foods and Markets.

In 1914 the first cooperative conference was held in Utica, the proceedings of which were printed and distributed. In 1915 another conference was held in Utica. The proceedings of that conference were never printed, due to lack of funds.

Recently, I have had some correspondence with the authorities of the New York State Agricultural College in regard to a conference on cooperation, which was proposed for Farmers' Week. I was informed that no conference was arranged this year due to lack of funds. As you all know, this is correct, the appropriation of the New York State College of Agriculture being reduced more than \$60,000 last year.

Our neighboring state of Massachusetts, with smaller resources and smaller area of agricultural land, has an extension man for cooperation and marketing; New York State has none. Our neighboring state of Massachusetts devoted several days to the subject of cooperation at its farmers' week gatherings; in New York we have no funds for this work.

At the last annual meeting of the New York State Agricultural Society, which is frequently referred to as the "senate" of the agricultural movement in this state, the following resolutions (which were printed in full on pages 1818 and 1819 of the proceedings of the 76th annual meeting) were passed: "We respectfully request the legislature and the governor to give the New York State Department of Foods and Markets adequate appropriation for the coming year, so that it may continue the great work so splendidly begun," and also "that adequate appropriation be asked from the legislature to enable the Department of Agriculture to carry on the work initiated under the Cooperative Bureau." Evidently the Feed Dealers' Association is more powerful than the State Agricultural Society and all farmers put together.

Among other important constructive measures passed in 1913 for the upbuilding of cooperation was the law for incorporating

cooperative societies. This is an ideal cooperative law under which farmers should more generally organize. The printed report of the "Agricultural Laws of 1916" does not even mention this law.

I wanted to get statistics as to the incorporated cooperative organizations in this state. I wrote a letter to the secretary of state, and he informed me that there is no separate record kept of them, and if I wanted to look for all the cooperative societies incorporated I would have to come to the Capitol and spend several months looking for them through the index of certificates.

While I could not gather statistics from all the cooperative organizations in the state, the facts and figures presented by some of them are interesting.

Mr. S. J. Cook, manager of the South Shore Growers' and Shippers' Organization, which is probably the most successful organization in the state, reports that in 1916 they have done business amounting to \$201,210.88, out of which \$173,165.85 was for produce shipments, and the balance for purchase of farm supplies. Mr. Cook adds the following in his letter:

The association has made splendid progress in organization and we now have 970 members; we also have applications from many growers who wish to become associated with us. I believe that by 1918 we shall have increased our membership to 1200 and perhaps more. The growth of the cooperative movement in Chautauqua County has been steady and as the farmers become educated to the benefits of cooperation, I believe that sooner or later we shall receive a much larger increase in membership. This association has accomplished a great good among the producers, having reduced the price of fertilizer and other supplies, while at the same time it has enabled our growers to receive a much higher price for their products.

Mr. E. E. Paddock, manager of the Benton Cooperative Company of Penn Yan, New York, says:

We have 97 members, and the amount of business transacted in farm produce and farm supplies since August 1, 1916, amounts to \$72,710.65. The business was organized about ten months prior to August 1. It did considerable business in farm supplies, but there was no permanent manager and no record kept of the amount.

Mr. W. U. Rixford, secretary and treasurer of the Allegany County Grangers' Cooperative Association of Wellsville, New York, writes that they have 101 members, and did \$20,000 worth of business. He adds the following in his letter:

We have now 23 local group men throughout the county. Every county in the state ought to have such an association.

THE JOINT PURCHASING COMMITTEE

At the Utica meeting held in 1914, the joint purchasing committee of the Cooperative Associations was organized, of which Mr. S. J. Cook is the chairman and Mr. C. C. Mitchell the secretary. In the two years that the joint purchasing committee has been doing business they have done over \$105,000 worth, most of which has been done during the first year of its operation, as on account of the high prices of fertilizer last year, as well as feeds, the sales have diminished considerably last year.

These figures do not represent all the work that has been accomplished by the joint purchasing committee. It can prove, beyond any doubt, that the farmers of New York State have saved in the purchases of their acid phosphate alone enough money to support a cooperative bureau in the state.

In this connection it is interesting to mention a few figures of the operation of the California Fruit Growers' Supply Company, which is affiliated with the California Fruit Growers' Exchange.

The Fruit Growers' Supply Company, organized about seven years ago, handled during the year ending August 31, 1916, a business of \$4,092,865.90 at the cost of 85.6 cents per hundred dollars of business transacted, and accumulated a balance of \$159,064.64 available for refunding to members. This cooperative company saved the growers thousands of dollars in shipping boxes and supplies for citrus fruit. This supply company owns a 26,000-acre tract of timber; it operates its own saw mill and box factory, and is planning to build its own printing plant for the printing of labels and other printing for its members.

There is absolutely no reason why the farmers in this state should not have an organization of this kind. There are many people in the state who say that while this is all true, the farmer should provide all these things himself; that it is not right for the state government, or Federal government, or the agricultural college to provide these things; otherwise, our system of government becomes too "paternalistic." It is absolutely useless, however, to have a law on cooperation, and credit unions, and dozens of other laws and not offer an opportunity to the farmers to get acquainted with these laws. As Mr. Camp, of North Carolina, put it, "What is the use of having laws authorizing farmers to organize credit unions without providing for organizers? It would be the same

as having a bill authorizing the farmers to organize schools without providing teachers and other equipment for maintaining them."

The farmers in New York State need a short-term credit just as much as the farmers of North Carolina or any other state. If the farmers in New York State could finance their business the same way as the business people of New York State, they would have an opportunity of saving thousands of dollars, in the buying of feed alone.

I do not see why New York State with its wonderful agricultural resources and large prosperous agricultural population should not have the same opportunity as our southern neighbor. It is just as important that our agricultural college and department of agriculture, which have been rendering splendid services in the dissemination of the latest agricultural scientific information about the production of staple products, dairy products, fruit, should bend their energies to teach the farmers the principles of cooperative buying, selling, credit, and every other principle of cooperation.

Cooperative organizations have been the salvation of Europe. I have recently read a statement of a well-known German scientist that, were it not for the cooperative agricultural societies of Germany, Germany would have starved long ago. Russia, which is considered a backward country, is rapidly developing cooperative movements among the farmers. Thousands of cooperative organizations for selling, buying, and credit have been organized. The government is rendering every possible assistance to them.

MR. GEORGE W. SISSON, JR. (in the chair): I am sure we have had a fine introduction to the program of the afternoon, for the three addresses which are to follow this report work along this same line. It was suggested to me by President Sessions that we proceed to the following address and then give opportunity for any discussion that was brought to your mind by Mr. Pincus' admirable report.

MR. SCHRIVER: I move that we accept the report of the committee on cooperation and marketing, with the understanding that the chairman may bring it up afterward at any time he may please.

Carried.

MR. SISSON: We are surely fortunate in following out this thought to have with us here this afternoon a gentleman who, by his relationship to a man of international renown, and who, by that very relationship and intimacy, has come in touch with these things, and it is with great pleasure that I introduce to you this afternoon the Reverend J. Leonard Levy, of Pittsburgh, Pa., a brother-in-law of the well-known David Lubin, who was a delegate to the United States from the International Institute of Agriculture, at Rome.

**A SYSTEM OF DIRECT DISTRIBUTION BETWEEN
PRODUCER AND CONSUMER**

REV. J. LEONARD LEVY

Mr. Chairman, Ladies, and Gentlemen: I am very much obliged to the chairman for his courteous introduction, but I could have desired that my identity as far as my relationship to my brother-in-law had not been disclosed to this meeting. I am very proud of my distinguished relative, but I especially desire that Mr. Lubin shall not be held responsible for any remarks I am to make. Sometimes we are misunderstood at the hands of our interpreters, and Mr. Lubin's plan, to which I shall have occasion to refer a little later, must speak for itself rather than through a man who by calling is neither a business man nor an agriculturist.

The subject assigned for this afternoon's address is, "A Method of Direct Distribution between Producer and Consumer," and I shall as definitely as possible endeavor to outline to you such a plan. Moreover, I shall feel exceedingly grateful to the men and women here present if they can make any suggestion by means of which this plan can be improved; while any question that may be asked during the afternoon I shall be glad to answer within the limits of my knowledge.

During the past half-century economic advance has been marked by a concerted effort to reduce waste. Any man or woman in this room this afternoon whose memory goes back about fifty years must remember that the factory system had not yet been highly developed, that methods of transportation were still in a very primitive condition, and that exchange in general had not received the attention which has been paid to it during recent

FIG. 7.—RABBI J. LEONARD LEVY



years. We know that the manufacturing branches of industry have gradually entered on an elaborate campaign for the elimination of waste, and in the course of time we are confronted by the difficulties surrounding corporations and their relations to modern society. What is true of the great factory system, which finds its highest expression in the large modern corporation whose efficiency department is endeavoring to eliminate waste in every direction, is equally true of the business house.

When I came from England to live in the United States some twenty-seven years ago, I remember that in my own home-land the average business house was exceedingly small. When I landed at Castle Garden in 1889 and went through what is now probably the most important financial district on the face of the earth, I was amazed at the smallness of the business community. Compared with the English houses of business to which I had been accustomed from childhood, the American house seemed to me to be a feeble attempt at modern business; yet, within the twenty-five years or so during which I lived in the United States I have seen the development of the large department store that was called into existence by the desire for waste elimination. Now the department store, in turn, has been followed by the great mail order house, which represents another step in the development of the effort to eliminate waste and toward a more direct method of distributing the products of mills and factories among the general population.

While these efforts have been made for eliminating waste in the industries of the United States, comparatively little effort has been made in a similar direction in the agricultural life of the Nation. In fact, an adverse condition faces agriculture in America, while a favorable condition confronts practically every other department of the commercial life of the Nation. After a careful study of the last census issued by the United States Government, I find that, whereas in 1861, when the Civil War began, the farms of the Nation were almost universally owned by those who resided on them, in 1910 about 37 per cent of the farmers of this nation were tenant farmers. If this progress toward the disappearance of our yeomanry has kept pace, by this time more than 40 per cent of the farms of the Nation are in the hands of tenants, whereas fifty

years ago more than 90 per cent of the farms of the Nation were operated by their owners. In the state of Pennsylvania there are at the present moment over 11,000 abandoned farms. While it is true that this year the prices of farm products are high, it is also true that we are confronted by an abnormal condition which will necessarily soon pass away.

Our attention has been called during the last year or two to what has become known in American life as the high cost of living, and the attention of the whole Nation is now being directed toward some method by means of which we can reduce, if it be within human power to do so, the oppressive prices which are crushing many millions of the citizens of this Nation. Before offering you the humble suggestions which I desire to place before you, let us turn our attention for a moment to the high cost of living and possible methods of reducing this same high cost. Wherever you find a progressive people, you will also find a continual tendency toward high prices. Low prices are as a rule an expression of a low standard of civilization. With a rising standard of civilization, there appears, along its natural course, a higher standard of cost, and if I had here a chart upon which I could draw lines showing you the upward curve of the standard of civilization, I could also show you, paralleling this curve, another rising curve indicating a higher and ever higher cost of living.

The high cost of living is not a matter that is characteristic of the year 1916 — it is a constantly growing tendency in a progressive civilization. I was over in Japan during the Russo-Japanese War and spent some months on the island investigating conditions there. I found that the laborer was well paid if he received \$3 per week in our money; but the needs of that laborer in Japan were exceedingly few. A little rice, a little fish, a hut — these satisfied him. Our needs are infinitely greater, and because our needs are greater the wage-fund must be larger, and must be distributed in larger proportion to labor. Now, wherever you have this larger distribution of the wage-fund, there you will have the rising scale in the cost of living. You can no more stop this constant rise, under such conditions, in the cost of living than you can stop the heart from beating in the breast of the living individual. It is characteristic of the higher standards of living and

civilization. So long as we live under our present economic system there will, normally, be a constant rise in the cost of living.

This condition has been aggravated during the past year. The world's crops were short. The reports from the International Institute at Rome showed that there was a considerable shortage in the wheat crop of the world. You practical men know that the price of wheat is not made in Albany, or New York, but that the price of wheat is an international price — that it is the world's supply that regulates the price of wheat. When we have a shortage of five hundred million bushels in the world's supply, you will have to pay a higher price for your wheat. When you remember the adverse conditions on the one hand to which we have already referred, and, further, that the men who raise the world's staples of wheat, corn, cotton, etc., all of which are sold at an international free-trade price, all of which are sold in the open markets of the world at a price which must necessarily be free-trade; when you remember that the same farmers who sold their staples in the open markets of the world were compelled to buy in the markets of America objects which are manufactured here, made under a high protective tariff — or even a modified protective tariff — you can easily understand, ladies and gentlemen, why it is that the man who buys in the protective market with a free-trade income is face to face with adverse conditions.

Again, when you realize that the farmer is the most conservative man in the world; that he is the least organized, according to his numbers, of any group in the world; that organization is necessarily slow; that the farmer has little access to the various agencies which can bring the farm in close touch with the city; and that it will require the combined efforts of the agriculturists and the national government to effect a situation which shall bring the producers and the consumers in close touch with one another; a clearer comprehension of the difficulties with which they are confronted is apparent.

Some efforts have been made in the direction of amelioration, and I am most anxious to remark that I would not have any word I say here this afternoon to be understood as a reflection on, or criticism of, our national government. Our government is wrestling with a great problem, and I think our government has done

all it sees its way clear to do at present to remove the difficulty. We have recently been informed by one very high in the councils of the government — no less a person than President Wilson — that in America, which is a democracy, improvement through the government will never be more rapid than the people themselves demand of the government. The president or the governors of our states will never move more rapidly than the consensus of public opinion causes them to move.

I am exceedingly grateful, therefore, for the opportunity given me by this New York State Agricultural Society to bring to you this afternoon a suggestion — not my own by any means, but one to which I became converted, and one in which I believe there are great possibilities. The government of the United States has done something to bring about a method of direct exchange between the producer and the consumer. Some time ago I was given a little pamphlet entitled, "From Farm to Table." This pamphlet contained the names of 248 men who were in the agricultural business and who offered their products for sale to consumers by means of parcel post. I went over this list very carefully and had a friend order some goods to see how the system worked. I am sorry to say that, as far as our practical experience goes, the method has not proved very satisfactory. The government of the United States does issue bulletins and does, in each of these bulletins, give the names of a few people. The bulletin that I had contained, among others, the names of some farmers in New York State. As before stated, only 248 names were given in all.

If the government of the United States were to bulletinize all the farmers of the country, you can readily understand that such a bulletin would be almost as large as all the telephone directories of the country combined. A bulletin of that size containing the names of millions of people would have to be published every day; they would have to be mailed to every household of the one hundred million people in the United States. A system of this kind actually put into operation on a large scale would fail because of its bulk. All other methods of direct dealing between producer and consumer, so I am reliably informed, have proved failures.

I desire to call your attention to the suggestion made to the United States Government in a bulletin published as Senate Docu-

ment 240 of the 64th Congress. Therein you will find a statement which the Hon. David Lubin made through the United States Senate to the government of our country in which he proposes a direct system of distribution by means of parcel post. You must remember that the people of the United States today are opposed, as a class, to government ownership, and in nothing that I shall say do I advocate government ownership. I am personally opposed to government ownership, but this has nothing to do with the case, and I do not want it injected into the discussion. In the plan I shall outline to you the United States is not required to enter into any industry in which it is not at the present moment engaged. In a word, our suggestion is to have the government of the United States apply the principles of the mail order house and the parcel post in the distribution of farm products. We know very well that the mail order houses have succeeded in establishing for themselves immense businesses, largely by the elimination of waste. We are informed that Sears, Roebuck & Co. do over one hundred million dollars' worth of business a year; that Montgomery, Ward & Company do about the same. There are other large mail order houses which have found the mail order business very profitable, and I have no doubt that, even in remote sections of the country, the benefits of this elimination of waste are being felt. When I spoke upon this subject in my own city a merchant came to me and said: "I don't regard you as a friend. Why, don't you know," he said, "a certain mail order house is now doing in Allegheny County—the county in which the city of Pittsburgh is situated—five million dollars' worth of business yearly?"

The principles of the mail order house applied to the parcel post in the distribution of farm products is an exceedingly simple device. There are three or four things which must be kept very clearly before you. You must remember that the very simplest things are usually the most intricate; that, while they seem to work with perfect ease, behind them is a system which may be so involved that few of us can follow it. You will remember, for instance, that the New York Central Railroad has a very intricate system, although the trains run very smoothly and rapidly. The simplest facts of human life are the most difficult to explain, and I should not want anything better, to confuse those who seek to

confuse me, than asking them to prove to my satisfaction in each case that the man loves his own wife or that the wife loves her own husband. These are among the simplest facts of daily life, yet there is no man living who can prove these simplest facts, because subjective experiences are not demonstrable by objective methods. If, then, this plan seems a little intricate to you, I want you to remember that most great systems with which we are familiar are exceedingly intricate.

In the first place, the post-office department arranges a room in the central post-office and in as many sub-stations as the community may require. These rooms will be fitted up with compartments, like those in a roll-top desk, each compartment numbered, from 1 to 50, 1 to 100, or 1 to 500, according to the size of the community. Outside of Pittsburgh we have a little village, Verona, about twelve miles from Pittsburgh. Verona stands to my mind as the type of a place which may serve as an illustration.

In the post-office there, the government of the United States fixes up a room with a series of compartments, like the top of a roll-top desk, attached to the wall, and numbered from 1 to 200, we will say, depending on the number of farmers who wish to make use of this place. Each compartment is of a different color — white, yellow, blue, red, etc. The series of colors adopted by the government would, after a time, associate the compartment with the farm product. Thus, white would mean eggs; yellow, butter; blue, squabs. Let us limit our attention to these three compartments. Each of these compartments has 200 separate and distinct mail boxes like those we find in the Senate post-office, in this building; and each box has a number just like those outside here, only it has no cut-glass front. The room is fitted up with a table and behind the table a chair; on the chair there is a young lady or a young man — some competent person. This done, we are ready for business. What is their stock? A few pieces of paper, among which is a tag. On this tag there will be a number. Let us suppose that I am a farmer — I call myself No. 20. I register as farmer No. 20; I give my name and it is registered in a book; I buy tags. These tags have exactly the same colors as these different compartments. These represent what I have to sell as a farmer — white, eggs; yellow, butter; blue, squabs. These tags have a

space for the owner to insert the price at which he wishes to sell his products. He buys these tags by the hundred, by the thousand, in any quantity. They can be sold at an exceedingly low price by the government. When he gets home with these tags, the farmer can start in business on the parcel post plan. That is action No. 1.

Action No. 2. The farmer has something to sell. He has, for example, ten dozen eggs, ten pounds of butter, ten squabs. He has these at his farm. He needs no market houses of any kind. The farmer keeps the goods where he has them. He put ten white cards, ten yellow cards, and ten blue cards into an envelope. The envelope is addressed to the Postmaster, Verona, Pa. He put it in his box outside his gate, and as the mail carrier goes down the road he sees there is mail in that box. He takes it out, puts it in his pouch, and carries it to Verona. When he reaches the post-office this envelope is opened and the clerk finds thirty tags, all numbered 20. He takes the ten white tags and puts them into the white compartment No. 20; the yellow cards into the yellow compartment No 20; the blue cards into the blue compartment No. 20. I omitted to say as I went along that each of these compartments has a series of slots, and before the clerk puts these tags into the compartment he observes that the eggs are to sell at, for example, fifty cents a dozen, and the price cards are put in the proper slot.

The farmer having sent in his tags and the tags having been distributed in the compartments, the consumer telephones the post office. The post-office receives the telephone message; or, better, for purpose of illustration, my wife goes down there to order some eggs. Mrs. Levy comes into the room, goes to the white compartment and says, "I want some eggs from farmer No. 20." Fifty cents a dozen, for example, seems to her about the right price to pay. She buys the eggs in the following method: "Please get me five dozen eggs from farmer No. 20." The clerk goes to box No. 20 and takes out five tags. Mrs. Levy writes her name and address on the five tags. The transaction is over as far as she is concerned. The clerk takes these five tags and puts them into an envelope addressed to farmer No. 20, and the next time the mail goes out they go to farmer No. 20.

Mrs. Levy can, if she likes, pay cash for the eggs. Many

of us pay before we get our goods in business. Many of us pay afterward. But somebody will say to me, "I want to see the eggs before I pay for them." This is not the way business is done today; it is not the way business will be done fifty years hence. I am informed that about ninety per cent of the business of the world is done with samples. I believe I am correctly informed. Mrs. Levy can pay cash, or, if she likes, she can pay when the eggs are delivered at her home where she can pay the postman. Nor need she pay him with cash; she can pay him with stamps. We propose that the government invent some form of stamp books for this purpose, like mileage books used by railroads, each slip of which will be worth 25 cents, more or less.

The farmer receives the order from Mrs. Levy, takes it out and reads it over. He takes the five dozen eggs and brings them down to the front of his farm. The mail carrier puts them into his car, and they are brought down to Verona. Then by the same process that our mail is now carried by parcel post, these articles are delivered by parcel post to the consumer. All we have to do is to work out the system. The method is known. We are doing it today in part and very feebly through the present method of parcel post. Introduce this system on a very generous scale.

Why should this be done? We are hearing about the high cost of living. The high cost of living represents to me an economic sin because it is a waste of exceedingly valuable power. Most men look upon money as a mere medium of exchange. I look upon money as a standard of exchange. I look upon money as the standard of human liberty, economically interpreted. Don't believe for a moment, men and women, that I would be guilty of preaching the meanest, most contemptible gospel ever preached to mankind — the gospel of money. I preach to you a new conception of money as the measure of human liberty in economic terms. Let me illustrate:

I am a poor man with a limited income. I earn my few dollars a week. I pay more than I should, for I have to meet the high cost of living. As I am paying one dollar for what I ought to get for ninety cents. I have to pay several middlemen's profits. If the middleman is necessary, he should be kept; if he is not, he should be eliminated. I am very sorry for the middleman if he stands

in the way of the operation of a natural law. I am also very sorry for the fellow that stands in the way when the lightning strikes; but that will not stop the lightning. I am told that eggs pass through six hands, but I cannot say whether it is true. However, if this is true of eggs, it is more or less true of other products of the farm, and you can easily see that these several handlings have to be paid for. The laws of trade are such that no man can afford to do anything in business without making a profit, and when one profit is charged on top of another profit, it is not satisfactory. Profits have to be compounded — profit compounded on profit. Where is the sin, then, if I have to pay one dollar for a certain number of eggs that I should get for ninety cents.

Yonder is a poor man. His child is ill. He has been buying eggs for several years paying one dollar where he should have paid but ninety cents. The child needs drugs, and there is no money. If you burden the poor by a ten per cent increase because of unnecessary profits to the trade, you may have robbed that man of a life; you have taken his child, by a system which cannot be ethically supported in a high court of morals. I am opposed to what I regard as economic sin.

This is one reason for my interest in this question. I am not deeply interested in farmers as such. They are no more to me than storekeepers, or bricklayers, or carpenters. I am not interested that farmers should get a few more dollars. I have raised my hand to high heaven, and I have consecrated my life to do my humble share to spread a better interpretation of the use of money. I am here today only to express to you what I conceive to be the moral obligations we owe to the Nation, to the republic.

So you can see, men and women, when we are talking about this high cost of living, we are interested in reducing, not the high cost of living, which I have already shown to you this afternoon is the characteristic tendency of the times, but in the removal of abnormal waste, in the elimination of that element which means a burden when applied to the great bulk of the Nation.

Again, ladies and gentlemen — and this shall form my closing utterance — there is also another phase of this question which interests me deeply. I said a moment ago that I am not interested in the farmer. I am not — in the farmer as such. Farmers mean

no more to me than anybody else, as such; yet the great bulk of the agriculturalists of this Nation are exceedingly dear to me because they comprise an element in this Nation without which America cannot endure. The farmers of this Nation represent an element which will make for the security of the republic, and their destruction will make for the downfall of the republic.

I am a foreigner by birth, one of "those immigrants," as I have already told you. It is true that it was men of English birth who gave us America, but I am a foreigner just the same, and sometimes it takes the man from abroad to see things we do not see ourselves. So many people born in the United States take the United States for granted. Everything in the United States is taken "just like eating stewed fruit." You do not appreciate, my fellow citizens of American birth, you do not appreciate what God has given you in this great republic. A republic is not a place in which men shall get fat and rich, although there are many who regard the republic as a place for the accumulation of wealth. To me our republic is the hope of humanity.

I have been a student of history since a boy and I have humbly endeavored to learn the great lessons that history teaches. I have seen this — that whenever adverse conditions struck the agriculturalists of a nation, the nation began to totter. I know, as a city man, that people never fight for their boarding houses and they never fight for their hotels. When fighting was to be done, in behalf of liberty and justice, the men from the farms were those who fought for them. Men, you must not permit the farmers of the nation to be treated inequitably. Crush the men on the farms and the vitality of the nation will be gone! The stability of the national equilibrium must be maintained by the people who live on the farms. The farmer is naturally conservative. If he were not conservative he could not be a farmer. And so, ladies and gentlemen, while I say that I am not interested in the farmer, as such, I am deeply interested in the welfare of the farmer as a representative of that conservative element, which is as the governor upon the engine — which will save this republic from being run to destruction by the radicals in the cities.

If, then, we can help to eliminate waste in agricultural commercial life, I believe that we shall render a service to the producer

by means of which he will receive not less than he now receives. At the same time we shall save, to the advantage of the consumer, at least two or three or more handlings, and the consequent profits of these handlings. In a word, ladies and gentlemen, I leave with you the proposition made by the Honorable David Lubin in Senate Document No. 240 — "Mail-orderize the parcel post!" In this way, eliminate waste, help the farmer to his own, and save the consumer from unnecessary high charges.

MR. SISSON: I am sure we have all been interested by this admirable address and this somewhat novel plan of bringing the producer and the consumer together.

As I stated before this address was given and following Mr. Pincus' report, there would be opportunity given for discussion; and, while we have two other addresses scheduled for the afternoon both appertaining to this topic, I feel that I should not be doing the right thing did I not give opportunity for any remarks or discussion either upon the report of the committee or upon Dr. Levy's paper. If there is anything to be said, or any questions to be asked, let us have them now.

MEMBER: I think we ought to have open minds toward any good suggestion, particularly those regarding cooperation between the farmer and the consumer, but I wish to point out one difficulty in this scheme suggested. The mail order house makes it very prominent: "Your money back if you want it." I don't see any way a person will be guaranteed their money back if the butter is not good.

DR. LEVY: The only way difficulties of this kind can be met is by trying the matter out. I have no doubt that when the system is first introduced, you will find some difficulties in putting it into operation. Show the United States Government that the butter was bad and the United States Government withholds payment. The government will settle with the farmer every week, not every day. The farmer will have to have some business methods. It would be a very good thing if the government can teach him some business methods.

MR. SCHRIVER: I don't mean to be impertinent, but I do object to hitting the farmer because every farmer is not a good business man. I am under the hallucination that the farmers as a class are as largely business men as preachers, lawyers, or doctors. No class is perfect. There are weak brothers in all professions and we have our share, but I believe as a rule there is more real business among the farmers as a class than among the preachers and lawyers.

MR. SISSON: To enjoy this, Dr. Levy, you must know that Mr. Schriver preaches himself. I don't know what we should do in the New York State Agricultural Society without Mr. Schriver.

In view of the topics of the succeeding addresses, it is my idea we had better proceed because it may be that the other addresses will illuminate this topic somewhat.

We are going to have an address from a business man. We have had one from a gentleman of the cloth, an admirable address, and now we shall have one from a professor of business administration, of Yale University — Professor Weld:

MARKETING FUNDAMENTALS AND COOPERATION

L. D. H. WELD

Mr. Chairman, Members of the Agricultural Society: It seems rather strange that you should have a minister and a college professor on your program this afternoon to talk about marketing. I wonder if some of you do not ask yourselves, "What do they know about marketing?" What little I know of the subject I have picked up through personal investigation of marketing operations. I studied it from the farmers' end, when I was with the Agricultural College of Minnesota before I went to Yale. I have studied it from the middlemen's end, and have had bitter experience from the consumers' end.

In all this agitation about marketing, I have been struck by the vast amount of ignorance and misunderstanding on the part of the general public, on the part of the farmers, and even on the part of some of our legislators and public officials with regard to this whole problem of marketing. I find that this ignorance on the subject has had certain results: 1. That many untrue statements

FIG. 8.—PROFESSOR L. D. H. WELD

have been spread broadcast with regard to marketing, most of which are swallowed whole by the unsuspecting public. 2. I find that there is a general feeling that the whole marketing system is cumbersome and wasteful in the extreme. 3. I find that there are a great many impracticable and unworkable schemes being proposed by a great many different people. Most of these statements and schemes have passed unchallenged, for the simple reason that people have not studied the subject of marketing scientifically as they should have done, and because it is only within the past two or three years that any serious attempts have really been made to get at the fundamentals of market organization and distribution.

There is a serious misconception as to the cost of marketing. It is commonly said that the farmer receives only 35 per cent of the price paid by the consumer. Some put it at 42 per cent. My own studies in Minnesota put the average that the farmer receives at a little over 60 per cent, but Minnesota does not produce many perishable fruits and vegetables. George K. Holmes, one of the leading statisticians of the Federal government, told your society himself in 1913 or 1914 that for fruits, potatoes, and dairy products, the farmer receives on an average 53 per cent, and that if vegetables were included, it would be about 50 per cent. In personal correspondence with Mr. Holmes, he says that if other staple products were included, the proportion received by the farmer would be much greater. My own estimate is that the farmer receives at least 55 per cent of the prices paid by the consumers. This is far different from 35 per cent. It is true that the farmer receives only 35 per cent for some commodities; on the other hand, the proportion received on certain other commodities is a great deal higher.

It is interesting to compare the cost of marketing farm products with the cost of marketing manufactured products. Farm products are not marketed on so much wider margins than manufactured products. It is said that it costs about about \$7 to manufacture a sewing machine that sells for \$40; it costs less than \$20 to manufacture a typewriter that sells at from \$80 to \$100. I should hate to know what it cost to manufacture a \$5 safety razor. It costs about 80 cents to manufacture a man's shirt that sells for \$1.50. In other words, the difference between producer and con-

sumer is on the whole just as wide on manufactured goods as on farm products.

The cost of marketing varies greatly with different commodities. In the case of butter the country creamery gets about 77 per cent of the retail price; for eggs, the farmer gets about 69 per cent; potatoes, 55 per cent; poultry, 45 per cent; market milk, 37½ per cent. The reasons for this variation in cost are as follows: Some commodities are more perishable than others; some are better adapted to standardization into uniform grades, and the more adaptable a commodity is to standardization, the easier it is to market. Marketing cost also depends on the extent to which production is seasonal. For all farm products the production is more or less seasonal, but the fact that butter and eggs are produced to a certain extent throughout the year undoubtedly reduces their marketing costs. The relation between bulk and intrinsic value also enters as a factor. The freight rate on western butter to New York City is only about 1½ cents per pound, whereas on potatoes the freight rate is a much more important element of the marketing cost. The variation in cost also depends on the ease of handling; grain, for example, is handled in bulk by special machinery.

The marketing of perishables is a difficult process. It is remarkable that any system at all has been developed whereby California peaches or Florida strawberries can be marketed in New York City at such a cost that growers can afford to raise them and consumers can afford to purchase them.

One other point in connection with the cost of marketing is that the retailer takes approximately one-half of the total spread between the farmer and the consumer; that is, of the total marketing cost from the farmer through the country buyer, the wholesaler and the retail trade, the retailer's slice is approximately as great as that taken by the country shipper, the railroad, and the wholesaler combined. In other words, by far the most costly element is the retail store. There is, therefore, more chance for saving in connection with the retail than with the wholesale end.

Most people think, and the thought has been voiced here very strongly this afternoon, that the principal trouble with the present system is that there are too many middlemen. The governor of your state, who has been giving some attention to this matter recently, was quoted in the public press as saying that "Of course,

what we need is to make our marketing system more direct," or words to that effect. Contrary to this belief, however, many of the articles marketed on the smallest margin between producer and consumer, like eggs, for which the farmer gets nearly 70 per cent of the price paid by the consumer, pass through the hands of a large number of middlemen, and are marketed on extremely small margins.

It would be possible to cite many cases where the addition of another middleman has resulted in greater economy and greater efficiency in the marketing system. The auction company in handling fruit is a good example. An interesting example is also found in New York in the butter trade. Butter arrives in New York from the West largely in tubs. It goes through the hands of wholesale receivers who take from one-half to one cent a pound, and sell in from 20- to 100-tub lots to jobbers. The jobbers then cut it up into prints. Some jobbers cut their own prints, but others find they can have it done more cheaply by a separate company, which specializes on cutting butter into prints, and which can therefore do it more cheaply than the jobbers themselves. But this means an additional middleman. Many similar examples of additional middlemen might be given. In other words, a new middleman does not appear in the marketing chain unless he can perform services more efficiently and economically than somebody else can.

In fact, the whole middleman system is an illustration of specialization, or division of labor, such as we have, and approve of, in manufacturing. In the cotton industry, one mill spins the raw cotton into yarn; it sells the yarn to another mill, which weaves it into cloth; the cloth is then frequently turned over to another mill which dyes and prints, or bleaches it, ready for final consumption. Specialization of this sort results in the greatest production of wealth, or services, for the least effort or expense. Can anyone give a valid reason why this does not apply to marketing as well as to manufacturing?

The conclusions to be drawn from this line of reasoning are as follows:

1. That there is ample economic justification for the middleman system.

2. That it is unsafe to say that there are too many middlemen. In some trades there undoubtedly are, whereas in other cases, economies could be effected by adding another. If the jobbers, for example, instead of each having his own delivery equipment, should employ an outside delivery company, or form a cooperative delivery service, economies might result — but this would be the adding of another middleman.

3. That all schemes of marketing reform that are based on the slogan “eliminate the middleman,” or “make marketing more direct between producer and consumer,” are visionary and impracticable, and stand very little chance of success.

This does not mean that the present system of marketing is perfect. I don't think that it is by any manner of means. I believe, however, that the general organization of marketing is fundamentally sound. I believe also that there is no possible revolutionary scheme that will change the whole marketing system; that the only way we can correct the ills is to ferret them out here and there by means of patient and thorough investigation, such as is being undertaken by the United States Office of Markets.

Now, let us turn to the matter of cooperation in marketing. I believe that a thorough understanding of marketing fundamentals, which I have barely outlined to you (if I were to talk two or three hours I could make myself much more convincing), is necessary in attacking the problem of cooperation. Cooperation is frequently urged as a solution of the distribution problem, and cooperation is most decidedly one of the forces that is making for better marketing. I mean by cooperation an organization that has the one-man-one-vote principle, where the number of shares which one may own is limited, and where the organization is either run on a non-profit basis or where the profits are divided on the basis of patronage.

I thoroughly believe in cooperation. I have studied it first hand in Minnesota, which is the leading state of the Union in the number of cooperative organizations among farmers. There are in that state over 600 cooperative creameries, about 150 live-stock shipping associations, nearly 300 farmers' grain elevators, as well as cooperative insurance companies. Minnesota farmers market over

sixty millions dollars' worth of produce a year through their cooperative organizations.

Cooperative marketing has several values:

1. It results in better packing and grading.
2. It results in raising better and more uniform varieties of produce.
3. It concentrates large quantities into single shipping units, and thereby often results in lower unit marketing-cost at country points.
4. Cooperation stops monopolistic and unfair practices of country buyers.
5. It often provides efficient marketing facilities where none existed before.
6. It has the indirect benefit of teaching farmers business methods, giving them business experience and a better knowledge of marketing conditions, and it also brings farmers in contact with each other.

Unfortunately, many of these benefits of cooperation are lost through mismanagement—by hiring a \$60-a-month man to operate a \$200,000 or \$300,000-a-year business. Oftentimes the farmers are disloyal. They are drawn away by the immediate profit of higher prices, and sacrifice the long-run profit which might be theirs; and, finally, farmers expect too much from their shipping association and are frequently disappointed with the results. In other words, they do not realize the limitations of cooperation. In the first place, the cooperative organization does not eliminate middlemen. In cases where there are no marketing facilities, and each farmer is shipping individually, the formation of a cooperative association really results in the establishment of another middleman. If that is not the case, it merely takes the place of other middlemen.

Furthermore, the benefits of cooperation come from marketing at country points; the benefits to be derived by extending cooperation to terminal markets are decidedly questionable. There is nothing to indicate that the farmers can perform city distribution as cheaply as the present wholesale organization performs that service. Very large farmers' organizations may have representatives

in the terminal markets, but even the California Fruit Growers' Exchange — the largest single cooperative organization in the country — relies on the auction and the jobber, and has no intention whatever of establishing the extensive sales organization that would be necessary in selling direct to the thousands of retailers in our large cities. In fact, from one point of view, the establishment of headquarters in Los Angeles by the California Fruit Growers' Exchange, means the introduction of another middleman — a further illustration of economy and efficiency achieved by introducing an additional middleman into the marketing machinery.

With these limitations in mind, and with proper management, farmers' cooperative organizations can succeed, and they can then derive the benefits already enumerated. The most necessary thing at present in connection with the whole problem of marketing is a better and more general understanding of marketing machinery and costs. When this is brought about, we may hope to be free from the absurd statements and proposals of the market "reformers," and we shall be able to deal with the problem with sanity and intelligence.

MR. SISSON: Differences of opinion bring out discussion, and we are very glad to have something presented to us from a different angle; it sharpens our wits and gives us a little different viewpoint. We all know where we want to get, but the question is about the road we are taking. Is there any further discussion on this subject?

MR. SCHRIVER: This is a thing on which we don't all agree. I sometimes wish we were as ignorant as some of the speakers suggest we are — I think it would be a relief to them — but there is a great deal of difference between theory and practice, and there ought to be some new things under the sun. We are certainly absolutely tired of the present system of marketing. Isn't that a matter of fact? So it is absolutely necessary for somebody to devise something other than now exists.

MR. WELD: If we can find anything better.

MR. SCHRIVER: How will you know if you don't try something else? We farmers know that the present system is unsatisfactory.

You don't consume any more than I do. I am more interested in the producing end. I am more interested in the producing part of it than in the consuming. The trouble about a great many men who are wise, know a whole lot, and invent elegant theories, is that when it comes to practice, they don't work out. The man who studies medicine finds that when he gets a patient he has something new on his hands; the lawyer gets admitted to the bar, but when he gets a case he has something new on hand. You can teach in your classes all the subjects you want to, but when you come to milk your cows and take care of your cream and make your butter, you have something else on hand that you did not learn in your books or your classes. I seriously object to the present system, or anything that approaches the present system of marketing. I don't believe that the farmer is as ignorant or as superstitious as a whole lot of wise men think he is. He knows when he is getting paid for his labor and when he is not. He knows when he can support his family and educate his children and have things that most men have. No class of men should be more generously compensated than those who provide food for the hungry to eat and clothes for the poor to wear. We must have a different system of distribution, all the colleges of the country notwithstanding.

MR. H. B. FULLERTON: I am not going to discuss or theorize. I have listened with the greatest interest to the two extremely well-founded theories, and I shall simply give my personal experience as a farmer.

I shipped to the New York market bushels of ripe, solid tomatoes and received four cents a bushel on the market. As my package cost twelve cents, my common sense taught me that the more bushels I shipped the more often I would be out eight cents. We examined the matter thoroughly and found that our tomatoes were selling at three for 10 cents — six cents more than we got for a bushel. We then decided that we did not need the seven middlemen we found between our bushel of tomatoes and the gentleman or lady who paid ten cents for three; consequently, as there was no time to make a law before we went broke or our tomatoes were gone, we promptly devised a means of absolutely obliterating the whole seven at one swoop. We now ship the tomatoes directly to the fellow that eats them. We give them what we

call "home hamper," consisting of six 4-quart baskets, for \$1.50. Of that sum we spend for transportation, for price of boxes, and for labor, just 52 cents. In other words, we get for the contents of our hamper 98 cents net. It looked so much better than four cents that we have kept it up. For the past two years, with our two large market gardens, we have been buried with orders we have received, without one cent of advertising. We did not have to advertise, because we had something the consumer wanted.

There is also the potato game. I cannot tell you about up-state, but on Long Island I saw them come out and buy in little job lots about 35 carloads of potatoes at 65 cents a bushel. They were never broken in bulk, except to put in a warehouse by the track. About seven o'clock that night, potatoes, which started at 10 A. M. that day at 65 cents a bushel, brought \$3 a bushel. That is the first man — that is only one middleman. The Lord only knows what would happen to the poor man who bought them after they had gone through the hands of the other seven middlemen! Sixty-five cents a bushel paid, and within twelve hours sold for \$3 a bushel. Where is the farmer's 35 per cent I have been reading about for ten years and have never seen? Eggs are bought from the farmer for seventeen cents and my own personal friends are paying one dollar a dozen in New York — not now, eight years ago. Where is the farmer's 35 per cent?

THE PRESIDENT: We all know how enthusiastic Mr. Fullerton is for New York State and especially for Long Island, but we are not able to go on with this discussion, interesting as it is, because we want to listen to the report brought to us from the Fourth National Conference on Marketing and Farm Credit, by an official who was delegated to represent this society, Mr. Leonard G. Robinson, of New York City.

FINANCING THE INSOLVENT FARMER

LEONARD G. ROBINSON

Three years ago, while testifying before the Joint Congressional Committee on Rural Credits, I created not a little disappointment in the ranks of the sponsors of the pending rural credit bills, and not a little satisfaction in the ranks of their opponents, when I directed attention to the fact that none of the bills under consideration made the slightest provision for the insolvent farmer.

FIG. 9. — LEONARD G. ROBINSON



WHAT IS AN INSOLVENT FARMER?

An insolvent farmer is the farmer or would-be farmer that cannot give the time-honored "fifty-fifty" first real estate mortgage as security for a loan. To this class belongs the marginal farmer who cannot put his farm on a paying basis because his encumbrances have reached the limit of marketable security. To this class belongs also the tenant farmer that is compelled to shift from farm to farm because he lacks the means of acquiring a farm of his own. Finally, to this class belongs the would-be farmer, that is, the farm-hungry man in the city — native as well as immigrant.

The terms "solvent farmer" and "insolvent farmer" may not be technically correct. In fact I have been taken to task for taking undue liberties with the King's English which, by the way, is not my mother tongue. I noticed, however, that in subsequent hearings this term was used quite freely, and that it has even been adopted by some of the more important financial publications. Be that as it may, the term serves the very useful purpose of designating the two classes of farmers around whom the recent rural credits agitation has centered, and to draw a clear line of demarcation between two distinct problems. Financing the solvent farmer is a financial problem, pure and simple. All that the solvent farmer needs is the machinery that will place him in a position to compete on equal terms with other solvent industries for the world's surplus funds. But the insolvent farmer, who has no acceptable marketable security to offer, cannot be financed on the same basis.

WHAT IS THE PROBLEM OF THE INSOLVENT FARMER?

As a concrete illustration, take the recently enacted Federal Farm Loan Act and apply it to the average tenant farmer. Let us call him Bill Jones. Jones has farmed for eight years on rented farms. By industry and good management he succeeded in acquiring a fine stock and a fairly complete equipment of farm machinery. Jones reads in his favorite farm paper that the new Rural Credits Law is designed to help tenant farmers become farm owners. He talks it over with his good wife, and they decide to buy the farm on which they live. They know their farm and want to make it their permanent home. It is not an expensive farm. The price is \$8,000, and the farm is worth it.

Jones gets his neighbors together, some of whom, like himself, are tenant farmers. He opens the meeting with a few appropriate remarks, and unfolds his plans for organizing a farm loan association. He tells them also about his plans for buying his own farm. Of course, he has no money, but he intends to borrow the needed money through the association. One of the farmers present calls attention to the fact that the most that can be borrowed under the new law is one-half of the value of the land, and that in order to buy the farm Jones will have to find at least another \$4,000 somewhere else. Jones is frankly nonplussed. He scratches his head. "By George," he says, "I never thought of that."

Jones returns home crestfallen and very much disappointed. His little wife comes to the rescue. Why not write to their congressman? Jones is pleased with the idea. He writes a good, strong letter demanding an explanation, and in due course he gets his reply. The congressman is most sympathetic. Yes, fifty per cent is unfortunately the limit that can be borrowed. The congressman, however, concludes with the comforting suggestion that the local bank or the owner of the farm might possibly be induced to take a second mortgage for the balance. Jones again scratches his head and says, "By George, I never thought of that."

But Jones has a distinct recollection of what a deuce of a time he had in getting \$300 from his bank a short time before. So he dismisses the bank. But the idea of the owner taking a second mortgage strikes him as rather good. Off he goes to see Squire Smith and lays the proposition before him. The squire is a friend of the Jones family. He has known Bill since he was knee-high to a grasshopper. He listens sympathetically, but cannot quite see the proposition from the same angle. Of course he will be glad to do anything he possibly can to help Bill. But a second mortgage for \$4,000 is entirely out of the question. He points out to Jones that if anything should happen and the land bank should find it necessary to foreclose, his second mortgage will be clean wiped out. Jones once more scratches his head and says, "By George, I never thought of that."

And so it is. Those who believe that the Farm Loan Act will directly and materially help the tenant farmer and the farm home seeker haven't thought of that — or of that — or of that.

Please do not misunderstand me. This is not intended as a criticism of the Farm Loan Act. On the contrary, it is an index of its fundamental soundness. With all its technical crudities, the Farm Loan Act is a really and remarkably effective maiden effort. What I wanted to show is that to all intents and purposes the average tenant farmer is still insolvent in so far as his ability to obtain the necessary credit to buy a farm is concerned. This, of course, is truer still of the landless man in the city. The difficulty lies, as I pointed out to the congressional committee in charge of the bill, in the fact that it is not possible to devise one system of rural credits that will serve equally the solvent and the insolvent farmer. You cannot lower the solvent farmer to the level of the insolvent, nor can you hoist the insolvent to the level of the solvent farmer. Financing the solvent farmer, as I have stated, is a financial problem. But financing the marginal farmer, solving the tenancy evil, and promoting the back-to-the-land movement — or by whatever name you may choose to designate the innate land hunger of the average human being — is not a financial problem at all. It is a social and political problem.

THE FARM TENANT

It is not my intention to tire you with an exposition of the evils of farm tenancy and absentee landlordism. These are too obvious for argument. We all know the economic waste, the moral bankruptcy, the civic and social sterility of farm tenancy. According to the last Census, 2,354,000 of the 6,000,000 farmers in the United States are tenants. This constitutes 37 per cent of our total farming population and an increase of 16 per cent over the preceding census. And yet, so far as I am aware, no serious attempt has ever been made to attack the problem rationally and comprehensively.

The argument is often put forth — chiefly by landlords — that the majority of tenants are perfectly contented with their lot. In fact they prefer to remain farm tenants. I fear that these gentlemen mistake hopeless resignation for contentment. The average tenant farmer, like the average farmer, takes his financial troubles with due Christian piety and resignation, and looks upon them as a visitation from heaven, like drought, frost, and bugs.

Then there are those who dismiss the subject with the offhand statement that these tenant farmers are a lazy, shiftless, and good-for-nothing lot, and that it is quite useless to waste any time on them. To my mind, this very argument is sufficient to cause grave apprehension in the minds of all thinking men. Just imagine — one-third of our farming population, or about ten per cent of our total population, hopelessly shiftless and shiftlessly hopeless. It is a situation pregnant with menacing possibilities, threatening the structure of our democracy and the very foundation of our civilization. Personally, I do not believe that there is any such proportion of shiftlessness among our farm tenantry. Assuming, for the sake of argument, that this is true, I want to say that the more shiftless, the more good-for-nothing, and the more irredeemably hopeless our tenantry is, the graver is our problem, and the more urgent is the call for a remedy. So much for farm tenancy.

WHAT ABOUT THE FARM HOME SEEKER? .

We all know that the vast majority of our immigrants are farm-born and bred. And we have often wondered at their perversity in choosing an industrial instead of agricultural career. The reason is economic.

The newcomers have not the money to start farming on their own account, and farm labor is neither steady enough nor does it hold out any other inducements to them. They accordingly dig our coal, build our roads, and what not, pinching and slaving, and seeing, in their mind's eye, the little farm home approaching nearer and nearer with every heave of the shovel and every swing of the pick. Unfortunately, for the want of a little encouragement, many of them fall an easy prey to the exploiter and the land shark; while thousands of others, losing all hope of realizing their dreams in the land of their adoption, return each year to their native lands, with hundreds of millions of good American dollars to be invested in farms at highly inflated prices. Accustomed to a higher standard of living and to a higher degree of personal liberty, many a repatriate sooner or later finds his native land, with its lack of educational facilities, its enforced military service, and its burdensome taxation, more than he bargained for, and he returns to God's country, minus his money, to start all over again.

Sentiment aside, it is a short-sighted policy that permits the immigrant, who becomes more and more of an asset as he accumulates money and acquires American ideals, to leave the country, when a little guidance and encouragement would transform him into one of the most stupendous productive forces of our country.

I hope you will not think I am a 'back-to-the-soiler'. I am not. I do not believe that there is any greater virtue in making two blades of grass grow where formerly there grew one, than in building two automobiles where formerly there was built but one. Besides, the automobile has been the greatest single influence in farming of all time. I am not especially interested in the reclamation of the desert, the swamp, or the abandoned farm. I am more interested in the human factor engaged in the work of reclamation. I am not nearly so much interested in increased agricultural production as in the agricultural producer. I don't even care a straw about the increased cost of living — though the Lord only knows I have more than academic interest in the subject — but what interests me most are the thousands of soul-weary, land-hungry human beings — native as well as immigrant — taxing their energies to the utmost in the ultimate hope of exchanging some day the congested city for God's open country, the tenement for the homestead, the factory and mine for the farm.

This, in brief, is the problem of the insolvent farmer — the problem of the landless.

HOW IS THE PROBLEM OF THE INSOLVENT FARMER TO BE SOLVED?

Europe, in its usual way of doing things, has made the problem of the insolvent farmer political and governmental. Russia adopted this solution in dealing with the newly freed serfs, and in its Siberian colonization. Germany employed it in its colonization policy in the Polish provinces and in West Africa. The principle was accepted in England with the enactment of the Small Holdings Act in 1908. Even democratic Australia and New Zealand have dealt with the subject on a semipolitical basis. The indications are that in this country we are tending in the same direction. The Crosser Bill, introduced in Congress last February — to my mind a most astonishing legislative potpourri of feudalism, communism, Dowieism, prohibition, and utopia — is, never-

theless, sound in so far as it is a recognition of the social and political significance of this problem.

But conditions here are so different that I cannot believe that the problem has as yet reached the stage of national legislation. The problem of Maine, with 5 per cent of its farms occupied by tenants, is not the same as the problem of Mississippi, with 67 per cent of its farms in the hands of tenants; the problem of Iowa, with 95.4 per cent of its area in farms, is not identical with that of Arizona, with 1.7 per cent of its area in farms. Federal action, therefore, is manifestly open to grave objection. Not only does the subject appear to come within the special province of the states, but they are clearly more competent to deal with it.

But while I believe that any state desiring to develop its agricultural resources, or one in which farm tenancy has become a menace in its body politic, cannot go very far wrong in recognizing the social and political significance of these problems and in endeavoring to solve them through the use of its credit and taxing power, I am not altogether convinced that state action is indispensable, or that it is even the best or most practicable solution of this vital — and, in the last analysis, national — problem. Apart from any political consideration, the states where the problem is the most acute are the least likely to deal with it on rational business lines. And it is on business lines alone that the problem can be satisfactorily dealt with. Let me give you a bit of my own experience.

SOME ACTUAL EXPERIENCE

The Jewish Agricultural and Industrial Aid Society, with which organization I have the honor of being identified, has been engaged in solving the problem of the insolvent farmer — in its limited and restricted sphere, to be sure, but none the less effectively — for sixteen years. During that time it has established on farms 3,151 families in thirty-five states of the Union and in Canada. The total financial outlay amounted to \$1,883,183.44, an average of \$597.64 per family.

To help so many with so small an outlay requires not only financing but finessing. How is it accomplished? The first step is to taboo the first mortgage. It is only in extreme emergencies that we make a first mortgage loan. We leave the first mortgage

to the vendor of the farm, the bank, the insurance company, or the private investor. The next step is to help our farmers to raise as many additional mortgages as they can for as much as they can. The third step is for us to take what is left over and what nobody else can be coaxed, cajoled, or sandbagged to take. For example. Of the 396 loans made last year, only 44 were secured by first mortgages, while 186 were on second mortgage, 108 on third mortgage, 27 on fourth mortgage, 4 on fifth mortgage, 13 on chattel mortgage, 5 on unsecured notes, and the remaining 13 on purchase contract. Just to show you that all mortgages look alike to us, I will tell you that this year we made a loan for which our security is a sixth real estate mortgage on a farm in Connecticut. And I am willing to wager that we will not lose any money on this mortgage, either.

“The insolvent farmer,” says the *Journal of the American Bankers Association*, in a recent article reviewing our work, “is not such a bad risk as might be supposed, even though working on charitable aid.” With loans decidedly marginal and security which is, to say the least, substandard, you will doubtless conclude that our losses must surely be appalling. Let us see. As I have stated, in sixteen years we have actually lent \$1,883,183.44. Our total losses for the entire period aggregate \$53,023.16, that is, 2.82 per cent. That our insolvent farmers are not so insolvent as they appear, is shown by the way they meet their obligations. Last year their repayments amounted to over \$160,000, of which \$40,000 was for interest. This year the repayments will aggregate about \$200,000.

Just think! This is what was accomplished with farmers who were not only insolvent financially, but agriculturally as well. What, therefore, could not be accomplished with our army of indigenous tenant farmers, inspired by a new independence and a new hope? And what could not be accomplished with some of the best European farming material right in our midst, if given a chance for land ownership, which to them is the emblem of nobility? While wrestling with our own difficulties and solving our own problems, I have often wondered why American philanthropy, American statesmanship, and American enlightened self-interest have so long overlooked a field of activity so pregnant with good,

so fruitful in results, and yet so consonant with sound business and financial principles.

What is needed is a national organization — call it the Agrarian Bank of America — that will perform on a nation-wide scale the same functions that the Agricultural Aid Society is performing for the Jewish immigrants.

THE AGRARIAN BANK OF AMERICA

This bank should stand midway between business and philanthropy, or to put it more correctly, should combine business with philanthropy. It should not be a money-making institution. Its operations should be conducted on a high social plane and its stockholders should be satisfied with a moderate return — say four per cent — on their capital. At the same time it should not be considered a charity. Its philanthropy should be conducted according to the most approved business and financial principles and practice. With a capital of \$10,000,000, and with the Federal farm loan system and other available agencies carrying the primary liens, approximately 10,000 families — at an average of \$1,000 per family — can be satisfactorily established; and, out of the repayments on the original loans, 500 more families can be added each year. The income on an initial capitalization of \$10,000,000, or even \$5,000,000, should — with loans made at six per cent — be ample to cover all costs of administration, make provisions for losses and reserves, and leave enough to pay a four-percent dividend on the capital stock. By adopting a limited degree of mutual liability on the lines of the Landschaft system, all risk of loss is virtually eliminated. While I do not consider the Landschaft as at all feasible for the solvent farmer, it is, to my mind, entirely practicable in dealing with the insolvent farmer.

It is not my intention here, nor is this the time or the place, to go into the complex details of organization, administration, and operation of this bank. What I have attempted to show is that the insolvent farmer is in no better position today than he ever was. I have endeavored to set forth the guiding principles that are essential to the solution of this problem. I have outlined briefly a plan to make these principles operative. I believe there is enough vision and imagination, and enough public spirit and enlightened self-

interest in this country to solve the problem of the insolvent farmer along rational business lines, and to make the Agrarian Bank of America more than a philanthropy and greater than a business — to make it a four-per-cent philanthropy combined with a hundred-per-cent business.

THE PRESIDENT: I think we are very greatly indebted to Mr. Robinson in so ably representing this society, as well as others, at the Chicago conference, and I would suggest that we extend to him a vote of thanks.

Motion by Mr. Tuckerman to extend to Mr. Robinson a vote of thanks was carried.

THE PRESIDENT: I hope that each and every one of you will bear with me a few moments and not deplete our audience to any further extent, as we shall keep you but a few moments longer. We have one other short paper, or a few remarks to be made by one other speaker. Mr. Thomas F. Degnan, representing the Post-office Department, wishes to say a few words to you.

PARCEL POST

THOMAS F. DEGNAN

In view of the high prices of food products now prevalent throughout the country, the Postoffice Department through Postmaster-General Burleson, is conducting a campaign of education showing the facility offered by the parcel post for the shipment of farm products directly from the producer to the consumer.

I have been delegated by Hon. William H. Murray, postmaster of Albany, to tell you of its extent and usefulness and to call your attention to the almost unlimited opportunity of expanding the business of producing and selling directly to the consumer residing within the local first and second zones, butter, eggs, and such meat and vegetable products as your judgment and investigation shows can be shipped in this way, with a sufficient margin of profit.

The domestic parcel post gives you a convenient, quick, and efficient means of transporting mailable parcels to any postoffice in the United States, or its possessions. The service reaches more

places than any other transportation agency. It brings producers and consumers into closer contact, thus opening the way to reducing the high cost of living.

Special treatment and advantages are accorded to shipments of farm products weighing between twenty and fifty pounds; low postage rates, based on service rendered, are provided.

The rates to nearby zones are particularly advantageous. Parcels may be insured against loss and may be sent C. O. D. By this method of distribution you form direct relations with each customer, eliminating the middleman's and retailer's profit; but it must be borne in mind that, in order to develop and sustain the business, you should be willing to share liberally with the customer in the city, the saving which is effected by parcel post shipment. You will readily understand that in dealing with you by mail the city customer foregoes the advantages of credit, personal inspection of goods, and immediate delivery of goods, and naturally would not deal by parcel post unless he felt assured that he could get better products at a less price than he could get from the city dealer.

You can send a parcel weighing 25 pounds in the local zone for seventeen cents, and one weighing 50 pounds for thirty cents. The local zone means:

1. Any postoffice for local delivery at such office. 2. Any city letter carrier office or at any point within its delivery limits, for delivery by carriers from that office. 3. Any postoffice from which a rural route starts, or for delivery on any other rural route starting from the same office.

The first zone means up to 50 miles from starting point; the second zone means from 50 to 150 miles. The rate for both zones is five cents for the first pound up to fifty-four cents for 50 pounds. The Postoffice Department wants you to become acquainted with and take advantage of the service rendered by the parcel post feature of the Postoffice Department. We ask you to study the rates, and any information you desire will be cheerfully furnished by any postmaster in the United States. All that applies in this campaign of "From farm to table" applies likewise to "From factory and city store to farm."

THE PRESIDENT: Do not forget our meeting tonight at 8 o'clock in the Senate Chamber. Our meeting tomorrow begins at 9:30 A. M. With these announcements, I declare this session adjourned.

EVENING SESSION

Meeting was called to order by Hon. Charles S. Wilson, Commissioner of Agriculture in Senate Chamber.

COMMISSIONER WILSON: I have the honor of presenting to you this evening the Governor of the State of New York, Honorable Charles S. Whitman.

GOVERNOR'S ADDRESS

HON. CHARLES S. WHITMAN

Mr. Chairman, Ladies and Gentlemen: It is a privilege always to welcome to the Capitol of the state the citizens of New York who are interested, as you are interested, and as the thousands and hundreds of thousands and millions of our citizens all over this territory — this great dominion which we call New York — are interested in the welfare, the development, and the upbuilding in all its activities; in all the varied lines and industries and concerns that are of very vital importance to all citizens, whatever may be their calling, whatever may be their occupation, whatever may be their work or their profession — the growth, the development, and the upbuilding of the great state of New York.

I always enjoy the privilege and the opportunity of talking to the citizens of the state, representing varied industries and varied activities and varied concerns and varied occupations. In the last analysis, of course, any great nation, any great state, any great commonwealth, is dependent upon agriculture for its support, for its sustenance, for its very existence. In the last analysis it is to the farmer, or to the agriculturist, or to those concerned with the attaining of development of the agricultural interests, or to those securing from the soil the support for our people, that we must look for continued prosperity, for continued existence.

It is not always unexpected — in political campaigns it has at times been rather expected and perhaps the rule for candidates for public office to declare — at least to the rural districts of the state, and not only in our state but throughout the Nation — that the

candidate himself, or those associated with him, have in early life been associated with the development of the soil and the products of agricultural industries. I am very sorry that I cannot make any such claim for myself; but, knowing as I do — to a degree at least — the needs of this state, the importance of the great work which you represent, to a degree — however, to a very small degree, because I know that even the representatives here do to a very small degree represent the vast agricultural interests of this the greatest agricultural state of the United States — so far as the Governor can, so far as the administration can, so far as a great party to which I belong and which I do represent, as well as the Governor of the state can, I want to assure you that the interests which you represent, in which you are concerned, to which you or at least your friends, some of you, are devoted, there is no question but that it is the duty of those concerned in legislation and administration to serve the interests of the food-producing people of this state. Just how to do it is a very serious question. I have been very much interested and at times very deeply — I won't say distressed, but disturbed over the conflicting plans, over the fact that those assuming to represent the farming interests of the state, I say over the fact that they themselves do not agree and cannot be brought to an agreement relative to what is wise in the way of legislation, in the way of appointments, in the way of administration. It is with the farming interests, with the agricultural concerns as it is with regard to all other great concerns of this vast state of ours, there are very decidedly conflicting opinions by those whom we have a right to regard as fairly representative of these great agricultural interests of the state of New York.

I was very proud — I am very proud tonight to hold in my hand the certificate awarded by the United States Panama Pacific International Exposition, which was held at San Francisco, the grand prize awarded to the state of New York for the largest and best exhibit of apples shown under refrigeration in the United States.

This was one of several certificates and grand prizes awarded to this state, to its agricultural interests, and to its industrial exhibits at San Francisco. Coming as I did, or representing as I did, an extremely eastern state, competing as we were with states recog-

FIG. 10.—HON. CHARLES S. WHITMAN, GOVERNOR OF NEW YORK



nized very generally as more largely agricultural, it was a source of great pride to me that the state which I had the honor to represent should lead, as it did lead, in its agricultural products, and in the wealth, and in the success of the agricultural interests which you here tonight represent.

I congratulate you and I congratulate the great state of New York in which we all live and which we all love, on what has been done. I feel that I may, and I want to congratulate you far more heartily on what may be done. I do not believe we have begun to come into our heritage. I do not believe that the state of New York has anywhere nearly realized her possibilities as an agricultural state, as I am sure she has not realized her possibilities as an industrial state, and as I still believe that we have not realized our possibilities along the lines of preparedness, along the lines wherein and in connection with which this great state should lead the Nation and should lead the world.

Now, gentlemen, as I said before, I cannot claim to be an agriculturist. I have never lived on a farm in my life. I often wish that I had. I grew up in a Presbyterian parsonage. I did not select that means of entering the world, but I want to say that if I had it to do over again I think I should choose the lines and the home in which I was born and in which I grew up.

So far as I can, I want to assist you, because I believe that the honest representation, the honest presentation of the needs and the requirements of the farming industries of this state should meet with the most hearty and the most cordial response of legislators and administrators, and I do want in closing to leave this word with you. There is no one interest in this state that should be conserved to the detriment or the exclusion or the neglect of other interests. The success of the farmer is involved with the success of the manufacturer, with the success of the capitalist, with the success of all — we are one people. I believe that every means should be adopted, and properly, to bring the producer and the consumer close together. I believe that that is true, not only in connection with the farming industries, but I believe it is true in connection with the manufacturing industries, I believe it is true with all the activities in which the people of our great state are involved.

We hear now and then of the necessity of preparedness; I believe in it. We hear now and then of the necessity of placing this state and this country in position where, should the necessity arise, we are able, may be able to defend our national dignity and our national honor and our national life at whatever cost — and I believe in that from my very soul. I would like to see every boy in this state and in this Nation properly trained to be a good citizen, and I believe that the obligation of citizenship contains it all, the obligation to pay for it by the last full measure of devotion, for the things that above everything else on earth are worth while. But I believe that preparedness means more than simply a training in the manual of arms — although I believe in that; I believe it means more than the training or the preparation of the boy and the young man to take up arms — although I believe in that; I believe that it means more than simply the ability to marshal forces and mobilize troops in time of war — although it means that. I think that preparedness means the fullest development of all of our resources, whatever they may be; the fullest development of our manufacturing resources, of course; the fullest development of our products of our lands as well as of our mills, of course; the fullest and the most complete development of the field, the meadow and the farm, I think that is what you men are standing for, and just so far as I may be able to help you in the development — in the intensive development of agriculture in this state, to the end that we may be and continue to be as we are today — the first agricultural state in the United States; in just so far as I may be able to — and I don't know how far that is — to assist you and to assist all in the great department here represented, just so far I pledge myself and those who are working with me in the legislature, not for my benefit, not for your benefit individually, not for the benefit or the growth or the strength or upbuilding of the administration or party, but for the growth, the development, the upbuilding of the great state of New York.

COMMISSIONER WILSON: We shall now take a recess for a few minutes and give everybody an opportunity to meet Governor Whitman.

(Recess)

COMMISSIONER WILSON: You will please come to order.

Governor Whitman spoke of preparedness, a topic that is widely discussed at the present time. We recognize, I think, that the word relates to peace as well as to war, and that it has a singular interest to us as agriculturists because the development of our agricultural resources is essential to the welfare and prosperity of our nation and also our state. Efficient training of the youth of our state is an important part of our preparedness program at the present time, and it is fitting that this association should discuss this topic from the viewpoint of the educator. The subject is presented to us this evening by the president of one of the foremost universities of this country. I have the honor — and it is a two-fold honor to me, Mr. President, because my education was under his direction — the two-fold honor of presenting the President of Cornell University, President Jacob Gould Schurman.

AGRICULTURAL PROBLEMS, AMERICAN AND EUROPEAN

HON. JACOB GOULD SCHURMAN

Mr. Commissioner, Ladies, and Gentlemen: There is one problem with which I imagine you have been concerning yourselves in this session or with which you will be concerning yourselves, for it is one that you and all of us are feeling very acutely, and that is the problem of the high cost of living. The problem of the high cost of living is one that comes home to us all.

If we examine the causes, they will be found to be in part permanent and in part temporary. The permanent cause of the increased cost of living is that we have come to an end of the exploitation of virgin lands. The period of land exploitation is past. While it lasted, it gave us the cheapest food the world has ever known. The climax of this period came towards the close of the nineteenth century. Since that time there has been a rapid rise in the prices of food and a corresponding advance in the price of good lands.

The high prices of food at the present time, however, are not due primarily to this permanent change in the agricultural situation. There are temporary causes in operation of tremendous efficacy. One of them is the great European war, which has resulted in abnormal demands for food supplies, while reducing at the same time the world's supply of food products. American exports have shown enormous increases.

Another, and a very potent, temporary cause of high prices is the short crop of 1916, which was a year of drought. According to the November crop report, the 1916 wheat crop was only sixty per cent of that of 1915. The total production of corn, wheat, oats, barley, rye, buckwheat, potatoes, and sweet potatoes in 1915 was 322 billion pounds. In 1916 this total fell to 257 billion pounds, or less than eighty per cent of the crop of 1915. This difference was due, mainly, to lack of rain. The potato crop of 1916 was only thirty-five per cent of that of 1915, which latter was itself only fifty per cent of the normal crop. Most of the increase of the prices this year over last year is due to poor crops.

Climatic conditions are not within the control of man. Yet we may assume in the future as in the past that these will ordinarily be favorable. We may also, I think, assume that the European war, if for no other reason than that of the economic and financial exhaustion of the belligerents, is not likely to continue for more than another harvest. And with normal climatic and human conditions reestablished, it will be recognized that the normal factors controlling the ultimate cost of living are the cost of production and the cost of distribution of food products. Whatever reduces these will tend to reduce the high cost of living.

So far as distribution is concerned, the matter has been investigated by three committees, one representing the governor and another the legislature of the state, and the third the mayor of the city of New York. These committees have presented a joint report, which was transmitted to the legislature in the first week of the new year. I have read this report with great interest and with lively appreciation. The members of the committees evidently realize the difficulty of the problem, and they do not hold out the inducement of a millennium, even when their recommendations are adopted. But they are of the opinion that the cost of distributing food products could be sensibly diminished by the organization of a state department of markets and city market departments with cooperative agencies for buying and selling, and instruction by means of bulletins and otherwise of the people of the state on all questions affecting the commercial and practical aspects of the supply and distribution of foods. As this report is now before the public, I content myself with endorsing its recommendations and

FIG. 11.— JACOB GOULD SCHURMAN, PRESIDENT OF CORNELL UNIVERSITY



expressing the hope that the legislature may adopt and act upon them.

Nothing, however, will bring back the days of the exploitation of virgin soils. In the future we must cultivate old soils intensively and bring into cultivation inferior soils. This is naturally a more expensive process than scratching the surface of rich, fertile soils for the first time. It will demand a higher intelligence on the part of our farmers, greater skill, more scientific methods, and better organization and cooperation.

As regards production, farmers adjust their yields to prices. Increased production involves increased costs and will only accompany increased returns. Many farmers know how to raise much larger crops, and to raise larger crops whenever they are convinced that prices will be high enough to make it pay to do so. Crop yields in New York have shown a decided increase in the last two decades because they have brought better returns to the farmer. They will continue to increase if the prices on the farm continue to rise. *Reliable statistics show that for fruit, potatoes, poultry, or dairy products, the farmer receives only 53 per cent of the retail price.* The fact must be clearly recognized that there cannot be an increased food supply without an increased return to the farmer. The saving must come, (1) through enabling the farmer to produce relatively more economically and thus obtain adequate return without too great increase to the consumer; and (2) through the elimination of unnecessary charges and waste in getting the products to the consumer.

In this regard the experience of the warring nations of Europe is most instructive for us. They learn for the first time a lesson that must also be brought home to Americans — I mean the perception of the vital importance of agriculture to the welfare of the country. They have recognized that the work of agriculture is second only in importance to that of their military forces and that it is one of the chief elements in the national defense. Agriculture has assumed a new position in the lives of these nations; it is the object of a regard and consideration such as it had never before enjoyed. "The full use of the soil," said the French Minister of Agriculture, "must be obtained at all costs equally with the supply of men and material to the army or the supply of labor to

factories engaged in national defense." And, in appealing to farmers for an increase in the food production of England, Lord Selborne said: "You are no longer individual farmers making your own fortunes or losing them; you are trustees of your own land to do your best for England; you have your duty quite as clear and as definite as the captain of a cruiser or the colonel of a battalion."

This, then, is the first lesson Americans must take to heart. Our Nation cannot live without efficient agriculture. In time of peace it is our staff of life; in time of war it is as essential to victory as soldiers or munitions of war.

The second lesson which the European belligerents are teaching us in this respect is that agriculture should be made nationally self-sufficient. The nation that depends on other nations for its food supplies is in constant peril. Only the control of the seas by the British navy has saved England from starvation. Great Britain, you may be sure, will never again allow two-thirds of the total area of her cultivated land to remain in permanent grass, with only one-third in cultivated crops. The British wheat crop in 1915 was the largest for many years, yet even in 1915 three-fourths of the wheat supply of Great Britain had to be imported. And the value of all her imported agricultural products for the same year was nearly \$1,400,000,000. The Germans had foreseen this danger and had prepared for it by a national policy of systematic encouragement of agriculture. As the president of the British Board of Agriculture publicly declared, "If agriculture had made no more progress in Germany than it had in the United Kingdom during the period 1895-1915, the German empire would have been at the end of its food resources long before the second year of the war."

There is a third lesson that the European belligerents may teach us in regard to agriculture. This is the lesson of cooperation between the central government, local societies, and individual farmers. The French government is working through local committees "of agricultural action" in each commune. These committees are agents of the government in mobilizing agricultural labor. And they have become responsible for the cultivation of farms or holdings which had fallen out of use, as well as for the supply of seeds, fertilizers, etc. Special efforts were made to

encourage additional gardening, and the services of the school masters were enlisted to instruct children in gardening and to carry on model gardens. In Great Britain, where agricultural committees and war food societies have been organized extensively for the assistance of farmers, among other important objects they are bringing new lands under cultivation, including private parks, pleasure grounds, and golf links. They are also giving valuable expert advice to farmers on subjects of practical agriculture and stock raising. In Germany the authorities are guiding the farmers in selecting the crops most needed and supplying fertilizers and feeds and in effecting economies in the utilization of agricultural products. A new imperial bureau to further the production and sale of vegetables and fruits was established during the past year.

In the fourth place, the belligerent nations of Europe have introduced organization and sound business methods into their agriculture. I have not time here to go into details and some of the facts I have already stated will serve for purposes of illustration. The problem has been to organize and coordinate all the agricultural forces of the country and get from them the highest efficiency by the use of the most approved methods and the most productive agents. I mention only one more example: In France soldiers were classified on the basis of farm experience. An opportunity was given them to volunteer for temporary work in the fields. But the French with their high sense of honor foresaw that such service might give rise to unfavorable comment, as though the soldiers thus volunteering to assist in farm work were shirkers, who desired to escape their military duties. And so it was proclaimed that these men should, on the contrary, be regarded as doing a double patriotic duty, themselves fighting and also keeping their brother fighters alive.

Lastly, perhaps the most impressive thing in the reorganized and revitalized agriculture of Europe is its utilization of science. The progressive belligerent nations are now reaping the fruits of the agricultural investigation and instruction which they carried on in the years before the war. The schools of agriculture and the agricultural experiment stations had sown the seeds of which the nations are now reaping the harvest. The product of their past work has become a source of great strength and resourcefulness.

This utilization of earlier experiment and investigation has furnished a striking demonstration of the practical value of such activities. As an expert writer on this subject has recently said in one of our own national agricultural publications: "The war has gone a long way to impress upon governments and the public generally the vital position which production occupies and the advantages of the new agriculture. The supreme importance of scientific research in all branches has been impressed upon the countries of Europe by the most remarkable demonstrations ever furnished. In these demonstrations and convictions the indispensableness of science to an adequate agriculture has been given a new understanding; and in the general results the institutions and working forces charged with the prosecution of science and education in agriculture have richly shared."

Turn to New York State. What have we accomplished — what can we accomplish for the farmers by means of agricultural research, instruction, and practical demonstrations?

As a general rule, change in agricultural practice comes very slowly. Improvement can be measured only by comparing the work of one generation with that of another. Farmers learn more readily by example than by reading or teaching. Apparently a most effective way of improving agricultural practice is to have distributed throughout the agricultural districts great numbers of practical farmers who have had superior training and who have known how to apply that training to practical ends. This is perhaps the most effective means of improving the agricultural situation, and it is what the agricultural colleges are commissioned by law to do. One or more practical farmers who have had superior training will be serviceable examples to the community in stimulating improved methods. Careful observation and experience have alike shown that this is the means by which we reach the average farmer. If one man in a community is induced to spray his orchards and he succeeds in obtaining a good crop, others will sooner or later follow the example. There must usually be a more or less striking demonstration of the new practice before it will be generally taken up. Even then the change usually comes slowly. We have the right to look upon our agricultural college graduates as centers of local influence wherever they are, and to expect them

to set examples of approved farming methods. In time they should come to have a very definite influence on the farming of the community.

In the next place, the State College of Agriculture has its extension work. So far as practicable, the attempt is made to reach the farmer by placing in each community a demonstration illustrating improved methods in some important farm operation. Such experiments are of many sorts. The following summary shows the number of such demonstrations in farm crops held in the state during 1916:

Summary of the Cooperative Field Tests and Demonstrations of
Thirty-six Farm Bureaus:

(January 1 to August 28, 1916)

Liming	183
Hay	85
Corn	617
Oats	455
Potatoes	392
Pasture	83
Alfalfa	394
Vetch	189
Clover	60
Soy beans	72
	<hr/>
	2,530

It will be noted that a total of 2,530 demonstrations in crop improvement were held during the summer of 1916. In a large percentage of cases these demonstrations were successful in showing the value of the improvement advocated, and they will have a marked influence in inducing the farmers of the region to take up the improved practice. It is impossible to measure the influence of these demonstrations, but we do know that within the last five years there has been a very great increase in the use of lime, in the practice of applying fertilizers to meadows, and in the treatment of oats for smut.

To illustrate the value of even a small improvement in agricultural practice, it may be pointed out that there are practically five

million acres of hay land in the state of New York yielding about 1.2 ton to the acre, the total value of which is about \$80,000,000 per year. We have plenty of evidence to show that an average yield of two tons per acre can be expected from better methods of culture. It is not expected that a change in cultural methods will come quickly, but if during the next ten years an increase of ten per cent in the hay crop could be effected, a conservative undertaking — this would mean an annual increase in the income of the state of at least \$8,000,000 a year. There are in the state of New York some *ten to twelve million acres of pasture land*, which are the basis of our great dairy industry. The State College of Agriculture now has some fifty demonstration pastures in the state and in a great many cases has succeeded in doubling the stock-carrying capacity of these pastures. This is a matter of the greatest economic importance to the state, especially in view of the increasing price of milk and meat products.

There are 3,000,000 acres of land in the state under cultivated crops. The art of cultivating crops has fallen to a rather low standard, due to the enormous supply of cheap products which have been coming from the West during the last forty years. However, the West is more and more consuming its own products, and is exporting less and at an increase in price, which must increasingly make us depend on our own supply.

From this summary it would appear that there are eighteen to twenty million acres of farm land in the state, or practically two-thirds of its agricultural area, which is in either crops or pasture, and very little of which is producing more than one-half of its possible yield.

Look next at the experimental investigations of the college. Before experimental work was established, most discoveries in agriculture were the result of chance. If they were not found out in this way, the problems were usually left unsolved. As an example we may cite alfalfa growing, which was introduced into New York more than a hundred years ago. Alfalfa is the most valuable of all perennial forage crops wherever it can be grown. The culture of alfalfa, however, made almost no progress for ninety years, and according to the census of 1899 there were only 5,000 acres in the state, and this on only a very limited area of favorable soil. Experimental work demonstrated that the reason alfalfa

failed in most states was owing, first, to a lack of lime; and, second, to the lack of inoculation of the soil with the proper bacteria. Largely by means of experimental methods it was determined that fully three-fourths of New York State was so low in its lime content that alfalfa could not succeed, and it was shown to be necessary in almost all parts of the state to use alfalfa bacteria the first time the crop was sown. This became generally known about twelve or fifteen years ago, and as a result alfalfa culture has since rapidly increased. In 1909 there were 35,000 acres, and there is probably twice that area today. The present possibility of successful alfalfa culture in most of the area of New York State can be traced directly to the previous investigative work on the use of lime and the need of bacteria for inoculation.

While there are many agencies at work to increase the supply of raw products, there are probably no other agencies which have such far-reaching influence as the institutions for agricultural education and research, since they are the principal sources for the discovery and spread of reliable agricultural information.

MR. SCHRIVER: Mr. Chairman, we have listened to a very illuminating and edifying address from, in my judgment, the highest agricultural authority in the great state of New York. I move an expression of appreciation and thanks to the speakers of the evening.

Carried.

COMMISSIONER WILSON: The change of a speaker is necessary, although there is no change in the topic or topics we are to discuss. Because of circumstances over which he had no control, Mr. Munn cannot be with us this evening, but in his place and representing him we are fortunate in having his co-worker, a representative of the National Dairy Council. If I understand the work of the National Dairy Council correctly — and if my understanding is incorrect the speaker will correct me — it relates to all branches of dairy work and has for its purpose the unifying and harmonizing of all these interests.

It is a pleasure for me this evening to introduce Mr. Julius Kahn who will discuss the topic, "Work of the National Dairy Council."

WORK OF THE NATIONAL DAIRY COUNCIL

JULIUS KAHN

Mr. President, Ladies, and Gentlemen: I wish it were possible for me to do full justice to the assignment, which unfortunately through the sudden illness of our worthy president, Mr. Munn, has fallen upon my shoulders; and while there is no change in topic, I can assure you that there is a decided change in the character and calibre of the speaker, so you will bear with me.

I wish it were possible for me to do full justice to the assignment which, through the sudden illness of our worthy president, Mr. Marcus D. Munn, has fallen upon my shoulders.

If I am correctly informed, your ancient and honorable society is the Nestor of organizations for the advancement of agriculture — not only in this country, but in the whole world. And it seems to me a rare privilege to bring to the East from the West the hearty greetings and solemn pledge of cooperation of the youngest organization for the advancement of agriculture. For our — your — National Dairy Council is a stripling, just born, but giving lusty signs of vitality and promise of performances of which you here in the Empire State will be, if not already you are, chief beneficiaries.

The National Dairy Council is a new type of industrial organization. And it is unique in its composition and its aims and purposes. It is not a class organization, but it envelops all branches of the dairy industry. It espouses no special interest, but it represents each and every interest within the dairy industry.

It concerns itself wholly with the community of interest existing, but hitherto ignored, between the various branches of the industry, and devotes itself exclusively to the unification of the industry, the harmonization of clashing interests, and the finding of the common ground upon which all may stand united, from which all may work harmoniously, for the achievement of the common good of all. The council comprises in its membership individuals and organizations of breeders; milk producers; butter, cheese, and ice cream manufacturers; milk dealers; the agricultural dairy and creamery machinery, equipment, and supply interests; national, state, county, and municipal officers concerned with the advancement of dairying or charged with the enforcement of laws safeguarding the public health.

The county agent, the animal husbandman, the dairy instructor, the professor and student of agriculture, the extension worker, the physician, the nurse, the domestic science teacher and student, and — last, but not least — the consumer and his organized life, find welcome and an opportunity to work together under the hospitable roof of this great, cooperative organization.

The council stands above the clash and contention of the clans. Cooperation — not competition — is its courageous cry.

Outside the council the Jersey breeder may claim kingship, look askance at the black-and-white, and have the compliment returned with compound interest; within the council they meet as friends and co-workers in the common cause of exterminating the scrub and enthroning the high-grade, the pure-bred bull and cow on the American farm. There they sound their battle-cry — “Better cows — more cows.”

Outside the council the milk producer may — for a while, at least — declare war upon and invade the domain of the milk dealer, and vice versa — each protesting to high heaven that there can be no peace; within the council they meet as friendly negotiators, conscious of their community of interest in increasing their business, getting a fair price for their product, and a fair apportionment between producer and distributor of the proceeds of their intelligent cooperation.

There they carry the common flag bearing this inscription: “Drink and cook with more milk, use more butter, more cheese, more ice cream — it’s good for you.”

In our council rooms there meet as friends big buttermen who formerly glowered at each other and played the merry game of the pot calling the kettle black.

And this is the way they came together:

“Jim, you spend a lot of money every year — less in advertising that your butter is good than in creating doubts as to the virginity of mine.”

“That’s right, George, and you have nothing on me in returning the compliment.”

“Well, suppose we put some of our money into a common pot to educate the American people back to a taste for butter on steaks, and chops, and fowl and fish, and bread, and buck-wheat cakes. In other words, let’s fight together, instead of each other.”

That miracle has been performed, gentlemen; thus the National Dairy Council. We do not preach disarmament, but a joining of arms in a common cause.

In the heat of battle milk producer and milk dealer have forgotten that America consumes less than one-third the milk which for its own good it can, and should, consume. When consumption was neglected, production languished.

Time, effort, and money were wasted in the quarrel about the apportionment of the little profit — time, effort, and money which might better have been invested in cooperation to build up a business of such volume and such profit as to enable each to deal generously with the other.

While buttermen have been tearing each other down, butter — their common product — has been nearly displaced in the kitchens of America.

Today, you cannot buy a pound of cooking butter in the city of Chicago, but on every pantry shelf you can find the cottonseed-oil substitutes for butter which were advertised constructively — nation-wide — while the buttermen were playing chess with each other.

And all this time we have had authoritative knowledge of the healthfulness of butter, of all dairy products, which, conveyed to the people through intelligent advertising, would have made the American dairy flourish as none other. Instead we have an industry disorganized, despondent, and declining — an industry upon which more than any other we depend for maintaining our supremacy in agriculture.

A handful of men of big vision divined these conditions and assayed them accurately. They had heard the cry from every platform — they saw the appeal in every farm paper, that something should be done, but nowhere did they see what that “something” was, and how that “something” should be done. These few men placed their finger on the sore spot and also found the remedy.

The sore spot was the wretched compensation to the producer. Who would continue — year in and year out — to milk cows at a loss? Nobody. No wonder the farmer became inclined to quit dairying, just as the beef producer quit producing beef when the business no longer paid him and became even hazardous.

These brave men of the council dug down further. They were not willing to believe that the milk dealer, the creamery, the cheese factory, and the ice cream maker deliberately euchred out of his profits the farmer upon whom they depended for their raw products, or endangered their source of supply by deliberately resisting every adjustment of price demanded by the advancing costs of feed, labor, and sanitary handling.

They found that the trade was only too willing to pay the producer his fair price, but that fear estopped them from proportionately adjusting their own price to the consumer. Fear of what? Fear of the consumer, his press, his politicians.

Prices of all commodities had risen — 35, 50, 75, yes, 100 per cent, while milk advanced but 11 per cent. When beef rose, the consumer kicked, but he paid. When clothing, boots, shoes — everything — rose, he kicked, but he paid. But when it was proposed to raise the price of milk, only one cent a quart, the consumer ran to the district attorney and wanted to have someone indicted and sent to the penitentiary.

And then there was the fear of boycott — the refusal of the public to buy at the advanced price — the tendency to curtail its consumption. The council quickly determined the causes for this attitude of the public.

They were lack of information as to the food value and economy of dairy products — each so great, in fact, as to justify the consumer in paying easily double what he was paying, when he would still receive more real food value, dollar for dollar, than he was getting in practically every other food.

To dislodge this ignorance of the consumer — to teach him the real value of dairy products — to make him appreciate them, pay a fair price for them, and eventually double his consumption of them, your council inaugurated the sweeping national advertising campaign which has already been worth millions of dollars in actual cash to the dairy industry.

This advertising campaign is lifting the veil from the consumers' eyes; thousands upon thousands of letters in our possession prove that. It is also lifting the curse of fear from the milk dealer, and he is anxious to do justice to you. You, men of New York, were astounded a few weeks ago when an institution that

you have always deemed your archenemy frankly admitted in page advertisements in the daily papers of the state that the producer had been underpaid.

Saul of Tarsus saw a great light — as you know. And this enlightenment, gentlemen, is the direct consequence of the study and activities of your National Dairy Council which, in this book, presents a brief for the dairy industry upon which all can stand and stand together.

Now we are adding to the national advertising a plan of local advertising. In pages, half-pages, quarter-pages and smaller space, week in and week out, seventy-six times a year, we shall hammer the fascinating story of dairy products into the public mind. The effect will be far-reaching and will spell new life, new ambition, new aspiration, new ideals, and an undreamed-of prosperity for the dairy industry.

First, the consumer will pay a just price for dairy products. You will receive a just price, for the consumer will have learned that the dairy is not exempt from the inexorable law of supply and demand and must charge more when production costs more.

Secondly, the consumer will largely increase his consumption. You will be doing a larger business, for the consumer will have learned that dairy products are the best, cheapest, healthiest foods he can buy, that he can live better, live longer, be healthier, be stronger, earn more, and spend less if he uses more dairy products.

And in powerful copy we shall show him that it is to his interest to use more dairy products and to pay a much higher price than he has been accustomed to pay. We prove to him conclusively that a flourishing dairy industry will mean a revival not in dairying alone, but in general agriculture. An increased demand for dairy products means more dairy cattle. More dairy cattle means soil fertility insured, an expansion of the food-producing area of the country, which in itself is a check upon the rising cost of living; or, as we have put it in a forthcoming advertisement: What you pay out in increased consumption of dairy products comes back to you with compound dividends in lower prices for all foodstuffs.

Thirdly, lest we forget — putting the business on this plane of justice and a fair profit will create a new regard and new attachment for this most ancient and most worthy of all industries. Our

producers will be encouraged to see in it a business worth while, a business worth lifting from its indifferent position of a side line (as it is with many) to a chief occupation. All the cherished ideals of quality, sanitary production and handling will be speeded by the assurance of a good, stable, and steadily growing market for the best milk obtainable.

Therein the National Dairy Council is distinguished from all other activities in dairymaking and agriculture. We yield to none in our attachment to and demand of the highest ideals obtainable. We, too, preach and preach and preach everlasting improvement. But we know it is useless to preach to men to make unprofitableness more unprofitable still. So to our preaching we add the business machinery that establishes and maintains a profitable market for the products we pray and preach for.

The producer who follows our lead will not have done so in vain or to his hurt. We sell his goods for him at a fair price and enlist the whole industry in this laudable undertaking.

And now, in conclusion, one word of warning to those who misunderstand the function and effect of advertising. The present abnormal market conditions lead many to the erroneous conclusion that the council advertising should be deferred until there is a relief in the present abnormal shortage.

If the European war should — heaven forbid — last another two years, we are none too soon in trimming our sails right now for the terrific readjustment in store for us. The bottom will drop out of the European market and, unless we are prepared to absorb the shock by having laid the foundation for a bigger home market to take the ensuing surplus, much that has been won in the last few months will be irretrievably lost. Do not court a setback which it would again take years to overcome.

One of the outstanding features of the foresight of German army efficiency was the discovery that every pair of trousers furnished their soldiers was provided with an extra set of buttons — in case of necessity. The Germans are prepared — they have been prepared for years — for the remote contingency of some one losing his pants just at a moment when he needs them most.

So, gentlemen, in parting let me urge you to allow no one to confuse you on the timeliness of your council campaign.

And so I add to my benediction and gratitude for your great patience the solemn injunction: Trust in God, keep your powder dry, and have that extra set of pants buttons.

MR. SCHRIVER: I move the unqualified endorsement of the National Dairy Council.

MR. SISSON: I would second this motion. The work which the National Dairy Council is doing is a work to which we can all thoroughly subscribe.

Carried.

PRESIDENT SESSIONS: Mr. Chairman, I believe there are none here who know of the effort Mr. Kahn has made to be with us tonight. I do not think before Sunday he had any idea of being in Albany at this time. He has come here to address us tonight and Thursday night he must be in Lincoln, Nebraska. Some traveling to bring to us the message of the National Dairy Council! I move that this body extend to him our sincere thanks and appreciation for his efforts in being here.

Carried.

Meeting adjourned.

WEDNESDAY, JANUARY 17

MORNING SESSION

Meeting called to order by President Sessions in Assembly Parlor.

THE PRESIDENT: I notice on your program for this morning the first thing that appears is the president's address.

PRESIDENT'S ADDRESS

F. W. SESSIONS

The remarks I shall make I feel will not be worthy of that distinction. I deeply appreciate the honor you conferred upon me by electing me as your president. I have enjoyed the work and the associations connected with it.

We have not been entirely idle — several meetings of your executive committee and officers have been held; many important questions have come before us, which were freely and carefully discussed, and what we thought to be appropriate action was taken; much time and attention has also been given to legislative matters with gratifying results.

When the Wicks committee was appointed, it was thought our society should take an active part in assisting them with their investigations. Along this line extensive correspondence was carried on with our members for the purpose of obtaining their ideas and information, which was transmitted to the Wicks committee, together with an offer (upon their request and at their convenience) to render them every possible aid and assistance.

A strong membership campaign was planned, much work has been done, and a fair addition to our life membership has been made, but much greater results were hoped for and contemplated.

Those of you who have long been identified with the society know the important place it has occupied in the agricultural affairs of the state. It was in 1791, that the first recorded association was formed in this state for the promotion of agriculture, known as the Society for the Promotion of Agriculture, Arts and Manufactures.

This society continued under different names until 1832, when a charter for twenty years was granted to the New York State Agricultural Society, which name has been since continued. A new charter for twenty years was granted in 1852, and in 1871 a charter for forty years from 1872 was granted, which expired in 1912 and has not been renewed.

Since 1840, with but few exceptions, the yearly transactions of the society have been published in book form. The reading and study of the old volumes is extremely interesting. The society was officered by the strongest men of their time; much thought and energy was devoted by them and other great men to practically the same questions and problems as confront us today. The addresses made by their speakers in the forties and even at earlier dates would, with the change of but few words, be appropriate and applicable to the present time and conditions.

In 1847 one of the strongest papers in the history of the society was prepared by that great man of his time, Silas Wright, but because of his death just before the annual meeting the paper was read by John A. Dix, at that time U. S. Senator. The original manuscript was afterwards presented by Mrs. Wright to the society, enclosed in a suitable case and placed in the hall of the society; but, like the 1,000 books that were in the society's library and the exhibits in the museum, it has disappeared and no trace of it has been found by your officers.

In 1848 an agricultural survey of Washington County was made by Dr. Asa Fitch of Salem, and his report is one that would greatly interest every one of you.

Other county surveys were made as early as 1828 and a survey of Seneca County in 1850. On December 14, 1848, B. P. Johnson, Luther Tucker, and J. Stanton Gould were appointed a committee to send to Congress a memorial petitioning that body to collect and disseminate agricultural information through the so-called home department; and I believe that through these early efforts your society really became the father of the Federal Department of Agriculture.

At the annual meeting in 1849, a resolution was passed deprecating the lack of interest on the part of our lawmakers in agricultural education and recommending the establishment of an

agricultural school with an experimental farm and veterinary department attached.

A state fair was annually held by the society; but about 1898 the State Fair Commission was created by the legislature and interest in the society became dormant and remained so until revived by R. A. Pearson, then Commissioner of Agriculture. Since then, much good work has been done and a great deal more can be done.

A study of the history of the society will show that the conducting of the annual fair was only one of and not the greatest of the society's activities.

The field for good work is as great, if not greater, than ever and requires much time and labor — more than men busy with the every-day affairs of life can afford to give.

With an income sufficient to permit of the employment of a properly paid secretary and the defraying of proper necessary expenses, I can see a big future for the society. It is not enough that we meet once a year, to listen to splendid timely addresses and exchange ideas. There is work for each and every day of the year. A paid secretary could keep in touch with the president and other officers, watch legislation and post the farmers as to bills being presented affecting their welfare favorably or unfavorably, attend meetings throughout the state of allied or similar organizations, furnish to the newspapers items of interest, assist in formation of cooperative organizations, keep the society in close touch with agricultural schools and institutions so as to render them assistance with their budgets and in other matters, and be of service to the farm interests in many other ways.

But how shall we obtain the necessary income? At present the annual membership is one dollar per year — life membership ten dollars. From these sources, we obtain barely enough for the expenses of our annual meetings. In 1847, life membership was \$50. We find by reports that contributions were also made as follows:

One of	\$450 00
One of	200 00
One of	150 00

Three of	\$100 00
One of	75 00
One of	60 00
<hr/>	
Total ..	\$1,035 00

Today many of our wealthy citizens are contributing freely to national and other organizations. The work that this society can perform is fully as important and has even a greater bearing upon such questions as high cost of living, agricultural education, cooperation, marketing, and legislation for our own state of New York, and I believe that under right conditions and safeguards we should find willing contributors. I would, therefore, recommend as follows:

That we incorporate under the membership corporation law; that we ask for contributions for an endowment fund; that we adopt a new constitution and by-laws; that such constitution provide for receiving and holding such endowment fund; that only the income therefrom be used towards the expenses of the society, and that such fund be administered by the executive committee or directors, together with a certain addition thereto appointed or selected by those contributing to such fund; that annual membership be \$2 per year; that life membership be \$25 per year; that endowment membership be not less than \$100; that a paid secretary be employed as soon as the income will warrant.

I have taken much of your time with this question and would like you to discuss it freely. I shall occupy but little more of your time. There are, however, some subjects which I think should receive your consideration; some of them will be discussed; and ably, by our speakers:

1. Sheep industry and state aid; sheep law to provide for the proper regulation of dogs.
2. Production and transportation.
3. Legal standard for grading milk.
4. Advertising of New York State throughout the country.
5. High cost of living.

There has been much agitation of the question of high cost of living, much of it hysterical.

There are, of course, abuses on the part of middlemen which should be corrected, but these abuses do not by any means prove that all commission men are dishonest. It seems to me that the honest middleman has his proper place in the scheme of distribution and should be recognized. I do not believe abuses will be corrected by boycotts, embargoes, and impulsive actions, but that they may be corrected by plans worked out by careful and logical reasoning. Abnormal conditions create an abnormal state of mind, which causes impulsive action, more harmful than beneficial. Cooperation should be the watchword. By proper cooperation, abuses may be corrected. This question, however, will be fully and ably handled this afternoon.

MR. TUCKERMAN: In order that the matter of incorporation may be brought definitely before you and with a view to its immediate consummation, I move you, Mr. President, that the chair appoint a committee of which you shall be the head, to proceed with the incorporation papers, signing and filing same with the Secretary of State of the State of New York, under the name of the New York State Agricultural Society.

Carried.

THE PRESIDENT: I would appoint as such a committee, and the motion I believe placed the president on the committee:

F. W. Sessions, L. C. Tuckerman, Gilbert M. Tucker, S. J. T. Bush, H. B. Winters, A. Denniston, J. A. D. S. Findlay, H. E. Cook, Geo. W. Sisson, jr., C. Fred Boshart, and Edward van Alstyne.

Now is the time for our regular business meeting. I have one thing to call to your attention before we proceed to the regular business of the society. I will ask the secretary to do this.

Secretary Cole read letter announcing coming meeting of National Security League, at Washington, D. C., January 25-26, 1917, with invitation to send delegates.

MR. SCHRIVER: I move that we accept the invitation.

Carried.

THE PRESIDENT: Are you ready with the report of the committee on the constitution and by-laws?

MR. SISSON: In view of the facts that you have just recited and the necessity for incorporation, it would seem that the report which had been prepared by this committee on the re-writing of the constitution and by-laws, would not be pertinent just now. I would suggest that the matter be left until the society is legally incorporated.

THE PRESIDENT: We will omit the report and call for the report of the secretary.

SECRETARY'S REPORT

HARRY E. COLE

It has been a number of years since there has been a report by the secretary at the annual meeting of this society, the reason being that there was nothing to report. But the past year has witnessed the frequent coming together at the call of the president of members of the society; the gathering of committees at the call of chairmen; informal conferences; appearances of members on behalf of the society before legislative committees and the executive relative to pending legislation; representation of the society at special agricultural meetings, and in addition, a deal of missionary work.

Shortly after the last annual meeting President Sessions requested the members of the legislative committee and others in the vicinity of Albany to meet at the Department of Agriculture to consider the bills then before the legislature which affected agricultural interests. Senator Wilson and Assemblyman Witter, both members of our society, were present and explained the bills under consideration and listened to the discussion on the merits of each. These legislators, one the chairman of the Senate agriculture committee, the other a member of the agriculture committee of the Assembly, each reported to their respective committees the approval or disapproval of the State Agricultural Society on the bills discussed that day, which expression of opinion proved an aid to the committees in disposing of said legislative bills.

Later on, other meetings were held by President Sessions at the Department of Agriculture, and in this connection I wish to record the unfailing courtesy extended by Commissioner of Agriculture Charles S. Wilson to the officers and members of our

society. Time and again during the past year has he welcomed the meetings of members and committees to the department, never failing to place his private office and every facility of his department at our disposal. There were the conferences also between the president and such members as he could conveniently reach when needed in Utica and in New York.

MISSIONARY WORK

Coincident with the selection of the present officers it was determined something should be done to increase the influence of our venerable Society to enable it to assume once more its former proud position in all agricultural matters. The surest way to accomplish this was by an increased membership and the consequent inflow of funds with which to attain the desired end. Many discussions occurred as to ways and means, and finally the president "started something" by contributing one hundred dollars and requesting the secretary to seek to obtain other sums to be used to issue a booklet and circular letters relative to the aspirations of the society and its desire for new members. The secretary was able to give his time but intermittently, but the presentation of the matter to Mr. Robert B. VanCortlandt was only necessary to secure an additional hundred dollars. Then came a hundred from a gentleman too modest to speak of it yesterday in his report—Vice-president Tuckerman. Senator Hill, of Broome county—though not a member, also contributed, and two gentlemen in the Education Department gave smaller sums. A life member of many years, living in Albany, and a business man, also of Albany, to whom the matter was mentioned gladly made small donations. The total was sufficient to print the booklet and some blanks and circular letters as well.

The secretary did a bit of traveling, calling on some of the older members of the society, placing before them the desires of its officers; from some he received assurances of good will, from others some discouragement. Finally, about the middle of last month the president expressed to the secretary his desire that a renewed effort to last for some days be made in New York City in order to ascertain whether it would be possible to interest men of means and of ideals to contribute to a fund to place the

society in a position to accomplish things for the agriculture of the state. This could not be done without funds—and again your President supplied the sinews of war. The presidents of the railroads of the state, or their representatives, were all visited and requested to send their industrial agents to this meeting to learn what is hoped for the society. Those gentlemen are with us today. Other men called on in New York were those known to have a more or less lively interest in agricultural pursuits. Your secretary had all kinds of receptions but received no cash, although this could hardly be expected from a single visit. His visits were of the nature of informing these men of the existence of the Society—to many it was not even a name. Others were members and had contributed to a National Society; still others politely begged to be excused. After more than a week of missionary work it was decided to call on those who have heretofore made large provisions for many and diverse public purposes—the trustees of the Rockefeller Foundation; the almoner of Mrs Russell Sage; the business man of Andrew Carnegie. A friend of your president indicated the approaches of these three possible sources of benefactions, and your secretary took a day to each, since the approaches to such sources may not be lightly nor hurriedly entered upon. Delightfully courteous was his reception by the trustee of one of the great fortunes, but alas, provision was not being made for any further endowments. It was possible however, that an annual subscription might be made, the same to be continued yearly, if after careful investigation it was felt that the same be warranted. The second gentleman approached listened most attentively, received the little booklet, stated that he would be glad to see further reports, and finally said, “If you will present to me a concrete statement of your aims, your condition and the disposal to be made of the money you wish to secure, I will give the plan every consideration.” Your secretary came away convinced there was a chance for an endowment—not alone by the words, which were conservative to a degree, but by the manner in which they were delivered, and by reason of the searching, intelligent questioning to which he had been subjected.

I could tell you tales of visits to men owning thousands of acres, of consulting with their secretaries because the master was

not in town; of calls with men great in the world of finance who have evinced a love of farming and of aiding agricultural institutions—only to be asked to come again, and of repeated attempts that were vain. I am convinced, however, that as one refusal is not final your secretary was, therefore, only breaking ground and that after the seed is planted and given cultivation, a crop may still be gathered.

The guarding of the interests of the farmers of this state, the protection and advancement of the instruments already established in the interest of our agriculture, has ever been in the hands—not of him who follows the plow, but of those who practise this oldest of professions in its highest forms. They are the men with vision, who see in agricultural advancement the greater glory of the state and the amelioration of the hard conditions of life under which so many labor.

These men of vision have always been present in the councils of this society—John Sloss Hobart, the great judge of New York, Chancellor Livingston, Le Roy de Chamont, the friend of La Fayette, Joel B. Nott, the president of 1841, George Vail, Lewis F. Allen, John Delafield, William Kelly, Ezra Cornell, Horatio Seymour and those families known the country over, the Wadsworths, the Thornes, the Dennistons, the Tuckers, the van Alstyne, and many, many others, the mere calling of whose names is inspiring. And, let me tell you that men of the same type—men of vision—are enrolled in our society today, are in this very room, and only our nearness to them prevents our recognizing fully that their aspirations are the same as those which animated the men of old whose names we revere.

MR. SCHRIVER: I move that the secretary's report be adopted and that he receive the hearty thanks of this society.

Carried.

MR. SCHRIVER: Mr. President, I think that we omitted immediately after your report was given, to adopt same. You made some valuable suggestions and whether or not we are able to reach up to their high standard, I think we should adopt it.

THE PRESIDENT: Will you give me an opportunity to say something? I would suggest that to my mind this is not made as

a report from the president, and that the adoption of the whole of it without discussion and without considering its purposes one by one, would not be so advisable as to take them up separately, although I am here to entertain any motion you wish to make.

MR. SCHRIVER: I perfectly agree with you, but I was under the hallucination that perhaps we would not have time for that. I move that we adopt the report of the president of this society and the recommendations, everything involved in it.

Carried.

THE PRESIDENT: We shall listen to the report of our treasurer.

REPORT OF TREASURER

HARRY B. WINTERS

Receipts

Balance on hand, January 19, 1916.....	\$178.09	
126 Annual members	126.00	
13 Life members	130.00	
70 Banquet tickets	70.00	
	<hr/>	\$504.09

Expenses

1916			
Jan.	20	Banquet	\$125.00
	31	Pubilicity	15.00
	26	C. E. Embree, expenses.....	27.30
	26	K. L. Butterfield, expenses.....	14.31
	27	Bastian Bros. Co., badges.....	27.00
Feb.	2	H. W. Sumners, expenses.....	25.00
	4	E. S. Brigham, expenses.....	24.23
Mar.	7	J. W. Helme, expenses.....	43.81
Apr.	7	College Print Shop, printing...	17.50
	8	Stamps	7.48
May	16	Brother Barnabas, expenses....	5.00
1917			
Jan.	2	Harry E. Cole	5.70
			<hr/>
			337.33
			<hr/>
		Balance on hand, January 12, 1917..	\$166.76

FIG. 12.—HARRY B. WINTERS, TREASURER



THE PRESIDENT: Before a motion adopting the report of the treasurer is made, I would like to ask if Professor Stocking is ready to make a report for the auditing committee.

PROFESSOR STOCKING: The auditing committee has applied itself diligently to the examination of the accounts of the treasurer and is pleased to report that accounts, as read by the treasurer are correct, and the account has been signed by the auditing committee.

Moved, seconded, and carried that report be accepted.

MEMBER: I want to revert to the minute in the report of the secretary with regard to that work in New York City. It seems to me that that is a line which can be developed most productively. If anybody starts to do work like that, it is a shame not to be backed up. If we believe in the results to be obtained by this society, that is the line of work; the mine is large, and if you go at it right, you could get results. In many instances those men in New York are wealthy and contribute generously to a public-spirited object. That thing can be done, and if you want to enlarge the sphere of this society, New York is certainly a hunting ground for it. Most of the men who can give live there.

THE PRESIDENT: I should like to say that I believe the secretary received a good deal of encouragement. I think it was very proper and very natural that those who were interviewed and to whom suggestions for this endowment fund were made, should want to know definitely how this fund was to be directed—whether the fund itself was to be used to defray expenses, and pay salaries, or whether only the income was to be used; and, as your secretary has stated, he was simply plowing the ground. The ground has not been harrowed or prepared for planting the real crop, but I believe that there is a great prospect and I don't believe that the field will be left uncultivated.

MR. F. S. WELSH: I was one of those interviewed by your secretary and I think now that this matter has been brought up it might be well for me to state frankly my opinion regarding it.

There is no doubt but that increased membership and increased funds are necessary for this organization. On the other hand, the organization as it exists today has no charter—it has no specified

way of spending money — no specified aim. You can approach the question of getting more members and more funds from two angles — either as a philanthropic contribution or as a business investment. I should dislike to see this society become the object of philanthropy. I believe that there are grounds on which this society can work which will make advancement of funds for the accomplishment of its purpose a business investment, not only to people who live in New York City, but what is more important, to the people who live on the farms in New York State, and I believe that if the society takes an active stand for these principles, for getting information, for circulating information that will lead to the business administration of the agricultural resources of the state, that they will find many people who believe that it is a good investment to add to the funds of the society, both financially and by giving of their personal work.

THE PRESIDENT: Your position to my mind is absolutely sound, Mr. Welsh, and I believe that not to New York City alone or to the wealthy people of New York City alone should we appeal, by any means. I assure you that that was not the intention of those working on that proposition the past year.

MEMBER: I would suggest that it would help to make your meetings more interesting. You have a good program, but you jam it full and have no opportunity for discussion. You allow five minutes for the discussion of a very important subject. The men who speak are undoubtedly good and the subjects are good, but I should like to have the opinion of men on the floor. Yesterday there was hardly five minutes for discussion after each one of the papers. I think it would be much more valuable to make this meeting so attractive the farmers could not help coming here. I can see no reason why the farmers should have to go to New York City to get money for our institution.

MR. TUCKERMAN: I might repeat some of the remarks I made yesterday in my report as chairman of the committee on membership. We are willing to do everything we can. There are only five or six of us; some of us are pretty busy men and we have given just as much time as it was possible to give. If the members of this society will give a corresponding amount of their time to

interest the members of the farming communities in which they live, and each man make up his mind that before the next meeting he will bring in ten life members and possibly an endowment or two, you will have a bunch of earnest men who will make this society the most progressive thing in the United States.

MR. WELSH: On the line of Mr. Tuckerman's talk, I want to say this: The first thing we would hear upon asking a man to become a member would be, "What does your society do?" He wants to know whether he is making a contribution to philanthropy or paying for something for which he will receive full value. We can say, "We hold an annual meeting once a year." There we have to stop, except to say that such members as are philanthropic and broad-minded enough give a good deal of time trying to work out problems. We cannot tell them that we have a paid secretary or hope to have a paid secretary who will spend his time seeing that the agricultural organizations and institutions of the state are properly supported in their efforts to obtain appropriations, or that agricultural problems of the state are investigated by responsible committees and the truth arrived at so that proper recommendations may be made to the legislature. I think that before we can engage in any membership campaign we must have some such definite reasons for requesting such persons to add their funds and time and help to make this society do what we hope to have it do.

THE PRESIDENT: It is an old saying that a chain is no stronger than its weakest link. Along that line, I believe that the weak links, if any, in our society should endeavor to strengthen themselves and thereby strengthen the society. Undoubtedly each and every member has in mind some definite thing that he believes this society should accomplish; and I am sure that your incoming president, whoever he may be, and also your other officers, will be glad to receive such suggestions from each and every member, by correspondence, by word of mouth, or in any other way — just as glad as the present officers have been to receive them during the past year — those we have received, and I assure you they have not been many. The officers are interested, they come here and preside at your meetings and work at your meetings; but, to a great extent, the members at large are quite apt to

forget the existence of the New York State Agricultural Society except at such time as they begin to receive notices of the annual meeting. If they would remember that they are the units of this organization, that they bear a portion of its responsibilities and should participate in those responsibilities, I believe that by such action and cooperation and energy the future of this society could be made to be a great one.

MR. TABER: I believe in high ideals, but perhaps our friend Tuckerman has set that ideal a little too high. I have a suggestion to make right here. Why can't the members of this society who feel the importance of this work and who are here today pledge themselves, as I for one will pledge myself, for two new members for the coming year? If we can make that pledge all through this society, we can more than double our membership; if we can, let us get what Mr. Tuckerman suggests—ten members and as many more as possible—but let us pledge ourselves absolutely to do something. I make that as a suggestion merely.

THE PRESIDENT: We are glad to receive these pledges. The stenographer will be very glad to take down the names and record the life members pledged by each one.

MR. STEVENS: Going over the past records of the society, I notice that a great many parts of the state are not represented at these meetings, and yet in looking over the list of members I notice that there are members of this society in practically every county of the state. It seems to me if we are going to make a canvass we should make it systematically. I suggest that the secretary forward to each member a list of the members that live in his county, and ask them to meet and canvass each county—ask for reports from each county. It seems to me that if we could make the members of each county a committee to canvass that county and bring the membership up, it would be well. I will make that as a motion.

THE PRESIDENT: Did you include in that any method of payment of the secretary for doing that work?

MR. STEVENS: We will pass him another vote of thanks.

MR. WHITE: I should like to second that motion. I have been watching for several years the work of the Chamber of Commerce

in Rochester, and every activity they take up along that line has been by team work. I believe if we could get the members of each county to work together, we would accomplish a great deal.

Carried.

THE PRESIDENT: I believe we should now proceed with the regular business. Report of the chairman of committee on nominations:

REPORT OF COMMITTEE ON NOMINATIONS

GEORGE W. SISSON, JR.

Your committee on nominations has given careful consideration to this matter, and I wish to say that we were guided somewhat by the fact that this society is to be incorporated legally today in compliance with the resolution that was adopted here, and the papers are prepared. We need not fear that our existence will lapse, and we have felt it doubly necessary that some of those who were strongly identified with the organization be retained in their places, not only for this reason but because we know and feel they are the right men in the right places. Therefore, it was our unanimous decision to present to you for your officers for the ensuing year, the following names:

President

F. W. Sessions, Utica.

Vice-Presidents

First District — L. C. Tuckerman, Milton.

Second District — H. B. Fullerton, Medford

Third District — Gilbert M. Tucker, Albany

Fourth District — Dean H. E. Cook, Canton

Fifth District — W. N. Giles, Skaneateles

Sixth District — F. G. Helyar, Morrisville

Seventh District — Seth J. T. Bush, Morton

Eighth District — F. N. Godfrey, Olean

Ninth District — F. A. Taber, Poughkeepsie

Secretary

Harry E. Cole, Albany

Treasurer

Harry B. Winters, Albany

Executive Committee

J. Y. Gerow, Washingtonville

William H. Manning, Saratoga

T. B. Wilson, Hall

C. Fred Boshart, Lowville

George W. Sisson, jr., Potsdam

MR. SCHRIVER: I move that the report be adopted and the gentlemen elected.

MR. TUCKERMAN (in the chair): I will make a little clearer the position in which that committee found itself in view of the condition of the society. We will have to incorporate under the membership corporation law, and the papers as drawn call for a board of directors of fifteen members. In order to file these papers the names of the directors for the first year must be inserted. It will make a change in the number of elected officers that we have been accustomed to, inasmuch as we have previously had a president, nine vice-presidents, and nine members of the executive committee. There will be a certain amount of routine work to be done in connection with this incorporation, which cannot be done in the short space of time remaining for this meeting. It therefore seemed advisable that those who ordinarily would be nominated as vice-presidents should this year be included in the board of directors, plus five additional men from our old executive committee arrangement, instead of nine. That accounts for the shorter list which your chairman has just read.

With this explanation, gentlemen, what is your pleasure regarding the report of your chairman?

MR. VAN ALSTYNE: I would amend the motion, that the stenographer be instructed to cast one ballot for these officers.

MR. SCHRIVER: I will accept the amendment.

MR. SESSIONS: Mr. Chairman, I wanted to say that I requested the nominations committee when it intimated that I might be mentioned by them, to refrain from doing so. There are personal rea-

FIG. 13.—GEORGE W. Sisson, CHAIRMAN OF COMMITTEE ON
NOMINATIONS

III—21



sons why I feel that I should not under any conditions continue as your president. There are many outside matters that demand my attention: On the other hand, there were some things that have been suggested by me here and some things that have been undertaken which I should like to see worked through. I told them if they would nominate someone else I would endeavor in every way to assist your new president in carrying out any plans. I should like to remind you that nominations are open and may be made from the floor, and I wish you would relieve me from this office. I have enjoyed it and do enjoy it and enjoy the associations, but I believe it would better if you elect someone else of your number.

MR. VAN ALSTYNE: I think it is a pity to wait until a man's death and then put on his tombstone all his virtues, and I think it is in order right now after what Mr. Sessions has said to voice, as I know I do, the opinion of the members here, as was evidenced by the manifestation when Mr. Sessions' name was offered for president, of their desire not only that he continue, but their satisfaction and appreciation of the fact that he continue as president. I have served with Mr. Sessions in the past and I want to add testimony to the zeal that he has put into the work, not only as manifest in the reports, but in his resources and his courtesy. It would be a misfortune at this time, I am sure, if for any reason Mr. Sessions should withdraw from the presidency.

MR. TUCKERMAN: All in favor of the motion will signify it by rising.

Carried.

MR. TUCKERMAN: The motion prevails and the stenographer will cast one ballot.

It becomes my very pleasant duty to announce to you the re-election of F. W. Sessions, as president of the New York State Agricultural Society.

I have also to announce the election of the other officers as submitted by the committee on nominations.

MR. TUCKERMAN: The president will resume the Chair.

THE PRESIDENT: I want you to know that I appreciate your confidence and appreciate the honor. It has been a great deal of

pleasure to serve as your president. It will be a great deal of pleasure to serve this year, but I feel that there are many reasons why I should not do so. The opportunity has passed for putting those reasons effectively before you, and under the circumstances I accept your election and with the aid and assistance of the other officers and directors and with you, the members of the society, I will endeavor to see that our work during the year counts for something.

I would ask Mr. Tucker if the committee on resolutions are ready to report.

REPORT OF COMMITTEE ON RESOLUTIONS

GILBERT M. TUCKER

Mr. President: The committee on resolutions recommend the adoption of the following resolutions, which were handed in by life members:

1. WHEREAS, We hold it unjust to require farmers, fruit growers, and other land owners to post notices around their lands not more than forty rods apart in order to protect them from trespassers, and

WHEREAS, Hunters and other trespassers have in many cases dug holes in our meadows dangerous to cattle and horses, have loosened and destroyed stone fences, left bars and gates open, trampled down grass and grain, picked or destroyed vegetables and fruit, killed poultry, and wounded domestic animals, therefore be it

Resolved, That the New York State Agricultural Society request the legislature so to amend the law as to extend the protection now given posted premises to all farm lands, whether posted or not, and make trespassing on fruit and farm lands without permission of the owner a misdemeanor, the trespasser in addition to be liable for all damage that is the result of his or their wilful entry.

Carried.

2. WHEREAS, The agricultural interests of the state of New York are greatly handicapped in the marketing of their products due to certain conditions which now exist, and

WHEREAS, These conditions can be improved by promoting cooperative organizations, and

WHEREAS, The Commissioner of Foods and Markets, according to Section 20 of the laws establishing the Department of Foods and Markets, is authorized to aid and assist in the organization of cooperative societies among producers and consumers for the purpose of securing more direct business relations between them, therefore be it

Resolved, That the New York State Agricultural Society hereby request the governor of the state and the legislature to make specific and adequate appropriation to the Department of Foods and Markets for the purpose of extending cooperative work.

The committee recommends the adoption of the resolution.

MR. VAN ALSTYNE: I do not know about this resolution, but I have an idea that it conflicts with existing law. We have a law on our statute books that authorizes such a department of cooperation in the Department of Agriculture, which law still obtains but is inoperative for lack of appropriation to carry it on. I have an idea that the resolution as it stands will not be of much force unless you repeal the other. I think we ought to have a clear idea of the situation before we vote on it.

THE PRESIDENT: I think there is another reason why it would not be operative. I believe plans are being prepared for a department that will entirely change the situation.

MR. PALEN: I have the law here that created the Department of Foods and Markets, and that law provides in Section 20-A that the department shall aid and assist in the organization of cooperative societies between producers and consumers. This is the reason, because the law creating this department has that provision in it.

MR. VAN ALSTYNE: I understand that, but we also have another law. It certainly is unwise to ask for laws that conflict with existing laws. If we pass this, action should be taken to repeal the other law. Our statute books are full of such things, laws passed and other laws not repealed.

Carried.

MR. TUCKER: We have a resolution sent by mail from a gentleman not a member of the society, but the committee were of the opinion that it should be submitted to the society.

MR. VAN ALSTYNE: I will assume the responsibility for introducing that, and I am a life member.

3. WHEREAS, The growing of beans is an important industry to the fruit grower, the dairyman, and the general farmer of this state, and

WHEREAS, Certain destructive diseases of the roots and vines of beans, which as yet cannot be controlled, are doing serious damage to this crop and are threatening the bean industry of the state, therefore be it

Resolved, That the New York State Agricultural Society here assembled endorse the action of the New York State Bean Growers' Committee in asking the legislature for an appropriation of \$8500 for the study of bean diseases, insect troubles, and the improvement of this crop by selection, and be it further

Resolved, That at the proper time a committee from this society send favorable resolutions to the governor, the commissioner of agriculture, and the members of the state legislature, endorsing the proposed bill.

The committee, having had no opportunity to give this any consideration, has no option but to submit it to the society without recommendation.

MR. VAN ALSTYNE: Might I say in support of this resolution, that the matter came to me in the morning's mail and I presented it, but it is not new matter. This resolution was discussed at length in the conference on agricultural legislation called by the Commissioner in December, and the records show that it was unanimously endorsed and recommended. So I want to urge it upon this society as a meritorious measure, which has been discussed also by the authorities at Cornell and Geneva and they have agreed as to the provisions of the bill and that the work should be carried on under the auspices of Cornell.

I do not know that the members are aware of the deplorable condition of the bean industry in western New York. In addition to

**FIG. 14.—GILBERT M. TUCKER, CHAIRMAN OF COMMITTEE ON
RESOLUTIONS**

the other diseases they have had to deal with for years, there has developed within the last year or two a new disease at the root of the bean of which practically nothing is known; and, unless this ravage is checked, the bean industry in western New York appears to be doomed, and it seems to me well within the province of this society to make such a recommendation.

DR. W. H. JORDAN: I want to substantiate what Mr. van Alstyne has said concerning the ravages of the bean diseases in this state. It was my privilege to travel through western New York quite extensively within a few days after this disease developed, and the situation was pitiful. I should like to make a recommendation. I said the same thing before the Fruit Growers' Association. It is a mistaken policy on the part of the state to be continually making narrow, specific appropriations for specific purposes. They are difficult to administer. I am in no sense opposed to this resolution, but we have been through the experience of specific appropriations for specific purposes. The policy the state should adopt is to equip its investigational institutions sufficiently so that they can take up with the force under their command these living questions and problems as they come before our agricultural people. We want to pass this resolution because, I believe, it is expedient to pass it, but I want to offer this amendment: that the committee from this society visit the governor and the committees for a personal conference. I have discovered in the course of twenty years' experience that resolutions don't amount to very much. I offer that amendment.

MR. T. B. WILSON: I heartily endorse what Mr. van Alstyne and also what Dr. Jordan has said. Dr. Jordan's suggestion is a very good one. If this could be included in the appropriation for Cornell University, I think it would be all right. I think it would be much better to include small appropriations of this kind in the appropriations for either the Experiment Station or Cornell University.

I should like to ask the Doctor if he meant that this committee would see the governor and see whether he wanted it this way or in the regular appropriation.

DR. JORDAN: I have no instructions to give the committee. I think they will do the right thing.

THE PRESIDENT: May I ask if you accept Dr. Jordan's amendment as a part of your original motion?

MR. VAN ALSTYNE: I certainly accept.

Carried.

4. WHEREAS, The rural sections of the state are not adequately protected and rural crime, by reason of defective and inadequate machinery, is not prevented, detected, or punished with the certainty and efficiency which the safety of our people demands, and

WHEREAS, The improving of our highways and the increasingly common use of the automobile are together making even our remote country districts easily accessible to the criminal classes of the cities, and

WHEREAS, Petty thieving and lawlessness are steadily increasing in the rural districts, and

WHEREAS, The safety of users of our highways is increasingly menaced by reckless motorists, speed fiends, intoxicated drivers, and drivers without lights, and

WHEREAS, There is before the legislature a measure for the better policing of the rural districts and highways through the creation of a state constabulary like Pennsylvania now has; therefore be it

Resolved, That we, the officers and members of the New York State Agricultural Society in our annual meeting assembled do heartily endorse the establishment of such a force and urge upon the legislature its enactment of an appropriate statute, and further

Resolved, That the secretary of the society be instructed to forward a copy of these resolutions to the officers of the legislature and the members of the senate finance and the assembly ways and means committees.

Carried.

5. RESOLVED, That the State Agricultural Society record its approval of the proposition to create a Board of Agriculture or Board of Agricultural Regents, which board shall elect a commissioner of agriculture to serve during good behavior, in order that

there may be secured the continuity of service on the part of this official so essential to an intelligent and efficient administration of the State Department of Agriculture, and, further, be it

Resolved, That a special committee be appointed to urge this matter on the attention of the governor and the legislature.

Carried.

THE PRESIDENT: Gentlemen, we each and every one of us owe a duty to our country, to our state, to our municipality, to our town, to our government in general; we owe a duty to the officers of our state, and the officers of our state owe a duty to us; the legislators of our state owe a duty to us, and they owe a duty to our state institutions. Our conception of their duties to us and to our institutions may not perhaps agree with theirs, but we feel that we have a right to explain what we consider these duties to be, and I know of no one better qualified to exemplify that question than Dr. W. H. Jordan, who will now address us upon the topic. "Duty of State Legislators to our Agricultural Institutions."

DUTY OF OUR STATE LEGISLATORS TO OUR AGRICULTURAL INSTITUTIONS

DR. W. H. JORDAN

Mr. President and Gentlemen: I realize that as an official of the state I am treading on more or less delicate ground in discussing the duties of legislators toward our agricultural institutions; but I want to assure you in the beginning, with the full meaning of what I say, that I believe our state officials, from the executive down, desire in the midst of great difficulties and many complicated conditions to fulfil their duty toward the agricultural institutions of this state. I do hold, however, that in the attempt at solving the problems which now face us, it is entirely proper for those who see the situation on the administrative side to present their views in a courteous spirit, in a spirit of helpfulness, to our state officials and our legislators. So this is my purpose this morning, and I want to assure you that anything I say is not in the nature of criticism, but rather with a desire to clarify our thought along certain lines.

Now, the first statement I wish to make is an underlying, broad one — that it is the duty of our state legislators to promote efficiency in our agricultural institutions. This is a basic principle of action. Without regard to personal aims or political needs or any of the conditions that surround this Capitol, the idea of efficiency should be fundamental and always to the front. Now, what I shall say will be in the nature of outlining general principles or certain ideals. I have been told, Mr. President, when I have outlined certain basic ideals as to government or the administration of institutions, "Oh yes, that is all right, but you cannot establish such conditions." In other words, there seems to be a prevailing feeling among men of affairs that there are policies recognized as sound which cannot be applied to practice. I don't like that attitude. If we don't stand for high ideals, if we don't inscribe them where they can be seen, we shall never attain them and we shall remain on a plane of action lower than if they were formulated in our beliefs and utterances and enforced in every way possible.

First of all, I want to place before your minds a perspective of the rise and development of the agricultural institutions of this country and this state. This present movement in the development of agricultural institutions, to which the Federal Government and the state governments have an important relation, was begun in 1862, when the Congress of the United States, legislating in the midst of a fearful civil war, deliberately and with the greatest of foresight, placed upon the statute books of this Nation what was known as the Morrill Act, setting aside to every state a certain portion of the public domain to be sold by each state. This was to create a fund for the establishment of the so-called colleges of agriculture and mechanic arts, the duty of which (and now I quote the language of the Act) "shall be to teach the sciences in their relation to agriculture and the mechanic arts, not excluding other scientific and classical subjects and including military tactics." And on this basis began a far-reaching movement in agricultural education. The national law was so framed that the states must contribute in the development of these institutions. The fund so created must be kept as a permanent fund and could not be used for the erection of the necessary buildings. Twenty-five years

later, under the influence exerted by these new institutions, Congress passed the Federal Experiment Station Act, which has been put in force in every state in the Union and to the support of which the various states have contributed. Congress has since passed additional acts increasing the aid to the colleges and experiment stations.

Bear with me while you listen to a few statistics. The land grant colleges have today property and invested funds to the extent of \$130,000,000; between seven and eight thousand persons are engaged in instruction in these institutions and in extension work, and the total number of students, counting none more than once, amounts to two hundred fifty thousand, a fair proportion of whom are students in agriculture. These colleges are expending between seven and eight millions of dollars annually in the support of their work. The experiment stations are employing about sixteen hundred persons and are expending between five and six millions of dollars annually.

I have developed these facts in order that you may see how we are related to a great national movement. But we are not so much interested in the national situation as we are in what exists in this state; and it is concerning our own interests I wish to speak.

When I came to this state to be director of your experiment station, almost twenty-one years ago, your department of agriculture was just in its infancy; your college of agriculture was a department of Cornell University and you had no state college of agriculture organized as such; you had no agricultural schools; you had no extension service; and the experiment station to which I was called had a force of thirteen men as against its present scientific staff of over forty persons. Since then there has developed within this state a great college of agriculture; secondary schools of agriculture; a wide-spread extension service; an experiment station that has increased in facilities, in its force of men and in the breadth of its work; and your agricultural interests, in so far as they are imbedded in these institutions, have now come to be an important factor in legislation and in the financing of the state. It is with reference to certain conditions involved in agricultural education and agricultural research to which I desire to call your attention.

There are two ways in which the legislators of this state fulfil their duties toward your agricultural institutions. One is through the organization that is accomplished by law and the other is through the fiscal regulations that are established.

First of all, Mr. Chairman, I wish to mention what I did not intend to discuss when I came here — I wish to refer to a movement that has been in progress in this state with reference to our agricultural institutions which I believe is very eminently wise, and that is the segregation of functions of these institutions. We have three functions in our agricultural institutions — investigation, which rests with your experiment stations; agricultural education in your colleges and high schools; and the administration of regulatory law.

Investigation is mentioned first because it lies at the foundation of education and even of the administration of law. I was called into a conference yesterday with attorneys who are conducting a case for the Department of Agriculture in which questions came up that could only have been answered because of a scientific investigation. Investigation lies at the foundation of all our intellectual activities in agriculture. Now, I believe in the segregation of functions. With the Department of Agriculture should rest, and rest alone, the administration of regulatory law; your colleges and your schools should administer agricultural education within and without the institutions; and your experiment stations should be given over wholly to investigation.

There has been introduced into the legislature a bill placing with the Department of Agriculture educational functions by making it responsible for the courses of study in our secondary agricultural schools. I have just said to the distinguished author of the bill, that in my judgment it contemplates an undesirable confusion of administration with education; that, in view of the conditions under which our State Department of Agriculture is organized and the character of its chief — sometimes a man academically trained and sometimes one taken merely out of the political ranks — it has not the facilities to take on academic duties and that all educational functions rightly center in our Department of Education. You may claim, as some do, that the Department of Education is not equipped to administer agricultural education. That is not the question. If any agency of the state of New York is not

organized for the exercise of all its proper functions, reorganize that agency.

I believe too, sir, as affecting a question now before the people of this state in a very intimate way, that all regulatory law affecting agriculture, whether markets, foods, or anything else, should rest with the Department of Agriculture. The state of Minnesota a few years ago woke up to the fact that it had seventy-five departments and commissions, and it immediately got busy through a committee serving without pay, composed of distinguished persons, to consider the various state agencies, and this committee recommended that all the state's activities be reduced to seven heads. We are making a mistake in the state of New York in continually multiplying departments and commissions.

Let us consider for a moment our State Department of Agriculture. Many of us believe that the present state policy with regard to that department is all wrong. As now organized the department is under political control, and its head is subject to change with every transfer of the state government from one party to another. Under the conditions that exist this is natural and perhaps cannot be avoided. Probably there is small reason for criticising a governor who has changed a Republican commissioner for a Democratic commissioner, or vice versa. But such rapid changes do not make for efficiency or for continuation of a definite policy. It takes a commissioner at least a year to learn where he is and what he is expected to do. It is a difficult and complex situation, for his duties and functions reach out into science, into economic conditions, and in many directions. Moreover, it is often true that under political pressure he feels obliged to make more or less changes in his staff.

What I have to suggest is that in this department there should be continuity of service, such continuity of service as brings to the head of the department such a comprehensive knowledge of his duties and relations as enables him to apply, after adequate experience, persistent, consistent, and intelligent direction to the administration of his office. And I submit to you, gentlemen, that under the present political conditions in the United States and the probability of a somewhat frequent change in the political administration of this state, whether we are not likely to have changes in the office in question, which does not make for the efficiency of any

department, particularly of a department that has a wide range of duties. And so I have this suggestion to make — it is not a new one: Many of us who have had this situation under close observation believe that one of the wisest steps our legislature can take is to organize in this state, by gubernatorial appointment and confirmation by the senate or by election from the several judicial districts, a body of men to be known as the Board of Agricultural Regents, whose length of service shall be so long that its members will secure a perspective of their duties and relations, and who shall choose a commissioner of agriculture to serve during his good behavior. There is just as much reason for this as there is that we shall have a Commissioner of Education to serve during his good behavior. The members of this board should be selected with reference to the peculiar qualifications demanded for wise direction of our agricultural interests. We should elevate the agricultural interests of this state to the same dignity we attribute to our educational interests.

I am now approaching the more delicate phase of my subject, and that is the matter of fiscal regulations. The tendency in this state today — and it is one which has behind it an honest purpose to administer the finances of this state in an efficient and economical manner — is toward what we call a budget. To be sure, we have always had a budget, at least we have had a budget for a good many years, but it has been one that would pass through a coarser sieve than the present one. The segregation is now very minute. It is not my purpose to discuss the budget in detail as it relates to any agricultural institution, but I propose to state what in my judgment, after nearly forty years connection with colleges and experiment stations, are the conditions which a fiscal system must meet if the efficiency of such institutions is to be encouraged and maintained. Let us establish an obviously sound basal principle, that a fiscal system should be subordinated to the desired ends, rather than that the ends should be subordinated to the system. Any fiscal system should be subordinated to the ends which a given state agency is expected to accomplish.

Moreover, there should be maintained in colleges and schools of agriculture and in experiment stations, essentially the same conditions that have prevailed in the old-time colleges and agencies

for scientific research, if you are to have efficiency in education or research, namely, liberty. You cannot tie the hands of an administrative officer, take away from him liberty and make of him a rubber stamp, without injuring the efficiency of the institution over which he presides. Surely it is not the purpose of our executive officers or legislature to bring about such an unfortunate result. This matter of a budget is in a state of flux. We have started out to secure economy by requiring an exact knowledge of where money goes and this good movement should not be abandoned, but we will find it necessary in some way to insure to our institutions the necessary liberty in the handling of their staffs and in such distribution of their funds as shall make for efficiency. These are general principles.

Let us examine more in detail some of the conditions that must pertain to education. As far as a college of agriculture is concerned, such an institution should be able to defend itself against the encroachment of other states upon its faculty through the payment of larger salaries. You may not realize the competition that exists in the United States today for good men. Not every man is fitted to be a teacher or an investigator and well recognized ability in these directions is much sought after. Our institutions in the middle west are especially hungry for good men, and they are encroaching upon the staffs of some of our state institutions. We should be in a position, within reason, to meet this competition. No institution in this state desires to pay exorbitant salaries.

More than this, every institution, whether it be a college or an experiment station, must be in a position to nourish the ambitions of the members of its scientific staff. That may seem to you to be an intangible argument. It is tremendously tangible to those of us who are administering institutions. If a young man is admitted to a teaching or scientific staff, it should be possible to give him encouragement that if he meets effectively the situation in which he is placed, he will be a subject for promotion. No educational or scientific institution can be successfully managed on any other basis. The administrative officer in the educational or scientific staff who is not able to nourish professional ambitions, is sadly hampered. If there is anything that is essential in educational and scientific institutions, it is liberty and opportunity.

I shall venture the prophecy that unless the conditions which have produced such splendid results in education and research in the past, can be duplicated in State- and Federal-supported institutions, efficiency will depart from these agencies and will rest permanently with those under private endowment and enjoying the necessary liberty of development.

We all know very well that it is not the intention of any state officials or of the legislature, to harm any institution. We are passing through a certain phase of fiscal development and you and I should lend our best efforts, as those interested in the welfare of our state, cooperating with those in authority to secure such fiscal regulations as will promote not only economy in the expenditure of the state funds but also efficiency in the various state institutions.

THE PRESIDENT: I would suggest that a vote of thanks be extended to Dr. Jordan for his very valuable address.

MR. A. E. BROWN: I would so move.

Carried.

THE PRESIDENT: I want to remind you that when we adjourn this afternoon, whoever offers a resolution for adjournment should do so in something of this way: That we adjourn subject to call of the chair, because there will have to be called a meeting of the society within a short period of time to consider and adopt the new constitution and by-laws.

We will adjourn the morning session.

AFTERNOON SESSION

Meeting called to order by President Sessions.

THE PRESIDENT: The first address will be by one whom I have known personally for a great many years, and who occupies a very important place in the state legislature. I know him to be thoroughly reliable and conscientious and to have the interests of the agricultural people of the state of New York very deeply at heart. He may not be infallible, like the rest of us, and may sometimes make mistakes, but if he does I assure you that they are not intentional mistakes. What he does he believes to be right and in our interest. He has been engaged on a very important work at the head of a very important committee and has kindly consented to come here and speak to us concerning the work of that committee and some of the results of their investigation.

I take pleasure in introducing to you Charles W. Wicks, senator from Oneida County.

WORK OF THE WICKS COMMITTEE

HONORABLE CHARLES W. WICKS

Members of the New York State Agricultural Society and others: I deem it a pleasure and a great honor to appear before you today.

At the outset, in speaking to this society of the work of the joint legislative committee, of which I have the honor to be a member, I am naturally limited in describing the scope and effect of the work by my personal participation therein.

As many of you know, this committee commenced a series of hearings throughout the state on June 27, and continued its work from day to day and from place to place, until November 16, 1916, when the committee took up, in the city of New York, an examination into the distribution of milk and other dairy products, and general market conditions.

Hearings were held in the city of New York, commencing November 21, and terminating for that year on December 21.

We believe it is the first time in the history of this state that the legislature, through such a committee or by any other means, has attempted to secure a comprehensive survey of the conditions under which dairy products are produced, handled, or distributed; and, so far as I am informed, it is the first time that such an attempt has been made by the legislature of any state.

The committee devoted its time from June until November to the farming community and the collecting stations, where milk was received and prepared for shipment to New York City; and to an examination into the amounts distributed in the upstate cities from Buffalo to Albany, the prices charged the consumer, and to a considerable degree into the profits realized on the traffic to the milk distributors in those cities.

You are all more or less familiar, both from your own experience, and from the public reports of the committee hearings, with the evidence produced before the committee as to the cost of production of milk, butter, and cheese. I do not desire to dwell upon these figures. That the price realized, compared with the cost of production, was too low, was soon established and is now conceded both by the distributor and the consumer.

We claim for this legislative work the credit of establishing and making known to the great body of consumers of dairy products that it was absolutely necessary that the dairyman receive an advance in price for his milk; and we believe and assert that it was due to this work that the dairyman was encouraged to demand, and the public to pay, without question, such increased price — a price that would bring to the dairymen of this state during the current year nearly \$10,000,000. We believe, therefore, that this committee can justly claim its due portion of the credit for the recent substantial advance made to the milk producers of this state.

At the inception of the movement in September last, this committee was abroad and naturally in close touch with everything that affected the dairy industry. Sinister whispers were being circulated to the effect that the Dairymen's League was only a scheme to collect assessments, and that the present and past collections of those funds were misapplied and used for the benefit of its managers. These rumors made men doubtful and uncertain.

FIG. 15.—SENATOR CHARLES W. WICKS



One of the useful services of our public hearings was to have brought before the committee the officers of this association with their books, which were therefore made a public record to establish to the satisfaction of the dairymen that all funds received by the league were and had been fully accounted for and wholly devoted to further the legitimate purposes of the organization, free from graft or misapplication.

At that disclosure, all concerned rejoiced, and the league agents and officers went forward in their work, strengthened and encouraged.

It recently has been claimed that this committee chose to take sides with big interests and political rings, instead of taking a strong stand for the farm interests. We know and most of you know, that this statement is made without regard for the facts or the truth of the case. It is made on the old theory that the farmers and dairymen are here to be humbugged.

It is not the farmer and dairymen alone that are victims of continual humbug, misrepresentation, and deceit; of course, on account of our great numbers, a round dozen of farmers and dairymen are victimized to one of any profession or class. Therefore, we are apt to hear that the farmer more frequently than others receives a gold brick, but I think a close examination of statistics will show that he gets only his just share.

We all buy the patent medicine fakirs' wares in about equal proportions. We all buy the Northern Spy apple tree of the nurseryman, which ultimately produces, after years of careful cultivation, a few small green nubbins. We all buy the equivalent to the get-rich-quick dairy food made up of oat hulls and elevator dust.

To protect ourselves and others from such common nuisances, and justly to educate the public into the danger of following these preachments is one of the proper works of such a society as this; and not only among the dairymen of the state, but in every other line of industry it is needful for bodies like this — disinterested, intelligent, and honest — to seek and discover the true situation and the truth of public questions.

The joint legislative committee was not able to complete its work to its satisfaction in the dairying section until late in November. We had, therefore, the period remaining before the session of the

legislature to make certain investigations which were deemed necessary in the city of New York. During these thirty days we sought to discover as best we might, particularly the cost profits of the milk dealers in the city of New York, a subject in which I know you are much interested. We also sought to discover the theory on which the price paid the producer for milk was fixed from year to year, and the factors which were deemed controlling by the buyers.

We found in our investigations up the state that it was a current proposition made by the buyers in fixing prices with the local producers to make the statement and insist that the prices paid for market milk must be largely controlled by the prices paid for butter and cheese.

As the result of the investigation of the committee and the examination of witnesses, we think it was demonstrated and conceded at our hearings by the best informed officials of the large milk companies that this proposition was entirely erroneous. The price of market milk should not be controlled to any considerable extent by current prices for butter and cheese. It is doubtful if any consideration at all should be given to current prices for butter and cheese in adjusting the price to be paid during any six months prior for market milk. So many and such different factors affect the prices for butter and cheese that do not in any way reach or affect market milk, that a wide difference must necessarily exist between the market value of the products.

For instance, it may very safely be stated at this time that practically the entire production of milk readily accessible to the lines of railways and within reasonable distance from the great cities of Montreal, Quebec, Buffalo, Pittsburg, Philadelphia, New York, and Boston is required to supply the inhabitants of those cities and the other large cities lying between them with fresh milk and cream, both for the consumption of the inhabitants of these great communities and for export to other towns and cities further south, or even to tropical countries where there is practically no production, and for furnishing the dining cars and ocean liners with their daily needs. This product must be supplied for these markets from the dairy farms along their respective railway lines.

But the butter and cheese for these same markets may be readily supplied from Wisconsin, Minnesota, New Zealand, or Holland; and the price of these latter products will be necessarily controlled or affected by the prevailing price of butter and cheese in those countries. The price of butter and cheese, therefore, will necessarily be affected by labor costs in those countries and by land and food values in others.

Again, a farm lies twenty miles from a railroad station. It carries twenty or thirty cows, whose product goes into butter and cheese because not available for shipment as market milk. Such a farm may readily be purchased for twenty-five or thirty dollars an acre. Its products, with those of many others, affect the supply and consequently the price of butter and cheese.

The same farm, located at a point accessible to a shipping station should have, and, other things being equal, does actually have a much higher value. Its cost or capital value to a dairyman may well be sixty or eighty dollars an acre. Obviously the producer of market milk in such cases requires an initial capital investment, double that one required in such case for the production of butter and cheese.

The same reasoning applies to the matter of cost of dairy feeds. The western stock or grain farm can and does produce large quantities of both butter and cheese, or milk, which goes into these products. Those farms or farm dairies not engaged in the production of winter milk, with stock supported entirely or largely by home-grown grain, produce quantities of raw material for butter and cheese and largely fix the price to be paid for those products. But by no possible construction can they be brought into competition with those of our farms so situated as to create a regular supply of market milk.

In the committee work of the city of New York, we succeeded largely in our endeavor to bring home these facts to the distributors of market milk, and in the end they conceded that these views were correct. We trust that the argument that the price to be paid for market milk must be controlled by butter and cheese value will no longer be used in the market milk territory.

Of course there are many other items of expense which I have not taken the time here to consider, such as health regulations,

carrying charges, winter feeding, etc. I refer to the subject only for the purpose of acquainting your members with one of the lines of inquiry pursued in the work of the committee.

Then we were earnest to discover the theory upon which milk prices were issued in the spring of 1915 by the various companies. We ventured the opinion that we have for the first time made this theory and method a matter of public record. The controlling factors considered by the milk buyers in determining prices to be offered at the country stations must be of considerable interest to you. I will endeavor to state them.

First, it was taken for granted that Greater New York and its surrounding territory was entitled to receive and must be supplied with milk at prices long established and customary to the public. The public was organized and vocal and its right to be supplied with milk at the customary rate was jealously watched by the newspapers. The milk companies, therefore, not wishing to engage in such a contest, moved along the line of least resistance. That line led directly to the dairy farm until October, 1916, when, fortified by the proof adduced before this committee, the dairymen, by strong and united action, changed its direction.

The milk distributor, however, up to that time, assumed as a foundation for his market figures that for each forty-quart can of milk reaching New York, he could receive but \$3.20, or thereabouts, assuming that the rates to the consumer were as permanently fixed as street car or subway fares. From this \$3.20 he first deducted what he considered an adequate return on his invested capital or profit. Then he deducted all his costs, depreciation, and losses, freight, handling and maintenance of country stations, pasteurization, and other burdens upon the business. Whatever remained after the deduction of all these items, was permitted to go to the dairymen; and the melancholy balance appeared month by month on the milk station door, where many of you have, no doubt, studied it with drooping spirits.

This is absolutely the method followed, as fully acknowledged and proven before us. Only the distributor and the consumer were considered at all in these computations. The important elements of cost of production of the raw material and constantly increasing cost of dairy feeds and labor were entirely ignored. Is it any

wonder, then, that statistics establish that the number of dairy cows shown in this state by the Federal Census of 1910 had decreased by upwards of 10,000 at least, at the end of the year 1915?

There are so many points of interest developed by our inquiries upon this and kindred subjects, that if I undertook to go into all of them I should consume far more of your valuable time than is here allowable.

It should be remembered that there is a season of the year when a larger quantity of milk is supplied to the stations than at others. This is the so-called "flush milk period," to which the buyer naturally points with great earnestness when making a bargain with the dairyman. He insists that he secures more than he needs and must make this surplus into butter and cheese. It is true that even during the past year, with the constant demand for milk which was never fully supplied, certain small quantities were turned from time to time into butter and cheese. This is almost a necessary incident to the market milk business, however, and in no wise a controlling factor, either as to profit or price, at any season of the year.

I am not going too far in asserting that our investigation satisfied this committee that, during the years 1915 and 1916, at least, there was at no time a substantial surplus of market milk offered or received unwillingly by the buyers. We believe that in those years at least, there was no "flush milk" that became a source of loss or that did not find a very profitable market. I believe the true state of affairs to have been that at the flush season there was a fairly adequate supply, and that during the remainder of the year there was an actual shortage in the market. Our inquiries revealed that the period of greatest consumption of milk and cream now very nearly approaches the period of greatest production.

The development of cold storage now makes it very easy to carry the excess cream in April and May, if any is produced, into June and July as a perfectly wholesome product. This, of course, readily carries any of the excess cream of June and July into August and September. This is further borne out by studies of certified accountants employed by this committee, who established

that, while the average profit of five of the largest concerns engaged in the milk business during the year 1915 were \$.0034, or 3.4 mills, on each quart actually sold as market milk at the prevailing price to the city consumer, these profits, by taking into consideration every quart of milk actually handled by these concerns and used otherwise, were only reduced to the figures \$.0027, or 2.7 mills.

I have gone into these matters, thinking they might be of interest to you. You are probably equally interested in what recommendations this committee proposes to make that may affect and are intended to further the prosperity of the agricultural industries in the state. We have tried to outline, as fully as possible, our views in the various reports recently submitted to the governor of this state, and in a preliminary statement recently made public by this committee.

This committee is keenly alive to the necessities of the situation. To make a successful law, however, is not alone the problem of this committee, but also all divergent views and interests represented by the executive and legislative departments of this state must be brought into substantial harmony. To this end we are laboring and hope soon to present a constructive measure which will be designed to further the interests of the whole state and not be created as the plaything of politics or to further the office-holding capacity of individuals.

No bill can accomplish these desired ends without in every step considering, promoting, fostering, protecting, and developing the dairy and agricultural interests of this state. When these measures are developed sufficiently to be made public, I ask you to give them consideration and careful study by independent investigation, and not be controlled in any way by irresponsible individuals or by those who may be personally interested.

Those entrenched in business or office will naturally be fearful that it may interfere with private sinecures or fraudulent practices. From such we expect and welcome opposition, but to overcome such opposition, we seek the earnest cooperation and intelligent consideration of such bodies as the New York State Agricultural Society.

When this bill is ready for legislative action, we invite each one of you who has doubts as to its wholesome purposes or effectiveness

to meet with this committee and consider its provisions with us, so that it will not be necessary for any one of you to rely for your information upon garbled report or purposely misleading statements, and so that the measure may have the benefit of intelligent and honest citizens.

THE PRESIDENT: I want to thank the senator for the information he has given us in reference to the work of his committee and would state to you that his address will be open for discussion by this body, but we have other splendid addresses ahead of us and I am going to ask those who wish to take part in the discussion to be brief and in making their remarks to confine them absolutely to the subjects touched upon in that address. Judge Ward, attorney for the committee, is present and if there is any question upon which we have a right as yet to ask for enlightenment from a legal standpoint, I am sure he will be very glad to respond in response to questions.

MR. LOTON HORTON: May I make a few remarks? As I am recognized as a middleman and have been a member of this association for a number of years, there is an article which appears in a New York paper today in regard to which my name and the name of my competitor are connected. There comes out in headlines in two of the papers today that a number of purveyors of milk in New York City — that is, bottled milk — are wilfully skimming their milk. This assertion was made by your Commissioner of Foods and Markets.

I suppose that you are all quite familiar with the fact that we have a department of agriculture and also a department in the board of health in the city of New York, that the taxpayers are paying hundreds of thousands of dollars a year to support, in order to safeguard the milk supply of our cities. I feel that that article reflects just as much on the department of agriculture and on the department of health as it does on the purveyors. As a member of this association I should like to have them take up this point and ferret down every possible irregularity that can be performed.

You know as well as I know that there is nothing in the purveyor's possession today, except his safe, that is locked. We are investigated, we are criticised, we are watched, we are dogged. I

have been a purveyor for pretty nearly half a century and I can say with all truth that I have never in my life sold a quart of milk knowing it was adulterated. I say it with great pride. All of these articles and misstatements hurt you people as much as our people, and those things must be corrected.

Our books show that our profit last year was two mills and a fraction on a quart of milk—last year, and where is it going this year? I am not pleading charity — I am willing to compete with anybody — I invite competition. If there is any living man who can put a quart of milk on your doorstep, my friends, equal to ours for less money, it is his good fortune. These things must stop. If that man is a vicious man, let us say so — stop such talk. Let us give the people what they pay for and let us tell them what we are giving them. That is a crime — such articles as that. Everybody is not dishonest — they could not be.

THE PRESIDENT: May I ask if you were questioned as to that before the committee — as to whether or not the milk was adulterated?

MR. HORTON: No, they never questioned me about that.

THE PRESIDENT: I think it would be interesting to hear from Judge Ward along the lines of investigation by the Wicks Committee.

JUDGE G. W. WARD: Mr. President and Gentlemen — I shall be glad to take the opportunity to add a word on the subject to which Mr. Loton Horton has referred. I think I can claim to be interested more, by far, with the dairy producers of this state than with the interests of Mr. Horton's company or any other company, and I feel that I ought to be able, after this investigation, to give competent testimony to the agriculturists upon that article. Now, I say to you just as solemnly and as earnestly as I can — and as to whether or not we are more interested in our work with the dairymen than with anyone else I am willing to have decided by the present officers of the Dairymen's League. I am willing you should take their judgment as to where our interests lie and have lain — and I say to you gentlemen, that that article in the paper is entirely without foundation; it is utterly false, vicious, and untrue. It is my duty to say that because I know.

We spent two weeks in New York City investigating the operation of the board of health in that city. We went down there convinced — not convinced, I should not say that — but we went down there with the idea that the board of health of the city of New York was more or less under the hands of the large milk companies. But after two weeks of investigation, when we went through their letter files, when we followed up every complaint; when we went through their work for three years; when we found them making peremptory orders to Bordens' and Sheffield Farms, cutting out milk they wanted to bring in; when we found that every day they were sampling milk from the wagons and examining in their laboratories the milk brought into New York; when we found the work of all these companies supervised by the board of health and the board of health again supervised by a committee, of which I think few of you have heard — but it is an important one, called the New York Milk Committee, who are jealous of the milk supply of New York and who have adequate funds contributed by private means to watch the milk supply of New York — we saw and we were convinced that there was no possible way by which the milk companies could unrighteously influence any action of the New York Department of Health. They are competent, they are skilful, and their laboratories are exact. They know, and we knew that New York today — and it is an important factor to the dairy farmers and agriculturists of this state which ought to be more widely known — is getting the best milk supply of any city in the United States, and is getting it much cheaper than I can buy the same quality of milk in a little town of 3,000 people, where I live. I cannot get, in my town, the quality of milk that goes into New York City. Why, to watch, supervise, and handle milk the way the New York milk is being supervised would cost in my town 25 cents a quart. New York can get it on account of the tremendous volume, which reduces and eliminates the overhead charges. That is the truth of the situation.

Now, I know all about what is in that article. The man who ran that Babcock tester, who gave the figures that appeared in the newspapers today is utterly incompetent to run any tester. He made those figures to order. We knew they were untrue and that the man was unreliable. We knew that the laboratories of the

board of health had absolutely contradicted these assertions. He is actuated purely by vicious motives, being a discharged employee of a certain milk company. We knew that he went to the board of health and made threats that he would publish certain things, with the object of these threats being made public and possibly of the milk companies buying him off. We warned him that he was coming very near to blackmail and should look out for the police department.

I bring that testimony because it is my duty. We know these things to be the truth, and that newspaper article is an outrage to the men engaged in distributing milk and an injury to the farmers of this state.

The suggestion was made to us in New York that we could get a half-dozen discharged employees of milk companies, who have grievances, to come before this committee to revile and slander the milk that was being supplied to the city of New York. Now, it was apparent to us that if we turned irresponsible and evil-minded men loose, whatever stories they might tell would be grossly exaggerated in the public press. Suppose, for instance, a statement was made to our committee by some ill-disposed person — a discharged employee — that on milk wagon "A" the driver removed the can and spit in the milk, and suppose the newspapers published the same — why, all of the milk in New York City would have been spit in. Suppose our committee devoted two weeks to such testimony, we would have cut down the consumption of milk in New York City 25 per cent. We said to the gentleman who made that proposition, "Do you think we are here to destroy the market for milk?" He criticised us severely and said we were allied with the interests because we would not avail ourselves of what he considered such very excellent ammunition.

We know about these things, and I am glad to bear this testimony and to say to you members of the State Agricultural Society that the state of New York is not a party to any proceedings of that nature.

THE PRESIDENT: I don't believe there is any intention on the part of any member of this society to favor falsification. I have not read this article and do not know the contents, but if people are guilty of crime there is a way to learn of their guilt and of

their being convicted. It seems to me wholly unfair that people should be convicted in newspapers before they have been tried. We are a little too ready to form quick judgments both ways. We have a right to opinions and certain places to express them. I am very glad both of these gentlemen have had an opportunity to speak upon this subject, and would ask if there is any further discussion on the work of the Wicks Committee.

If not, we will listen to some other good plain talk coming from a source that plain talk always comes from — not all the plain talk there is in the world — but we know when it comes from this source that it is plain talk. We have recently had opportunity to read many things and to listen to many statements in regard to the high cost of living, and we recall the boycotts established on eggs and farm produce. We have our own opinions as to whether they were justifiable or otherwise. Now we are going to let Mr. Bayard, of Pittsburg, editor of the *National Stockman and Farmer*, tell us his opinion and enlighten us as to the justifiability of these boycotts. I take pleasure, ladies and gentlemen, in introducing Mr. E. S. Bayard.

FOOD BOYCOTTS

E. S. BAYARD

Let us waive the question of the legality of food boycotts at the outset. In the nature of things, no matter how clearly illegal any such movement may be, the law can afford no remedy; and I am not competent to deal with that phase of the matter.

A food boycott is usually a transitory affair, running its course in a month or two. It is annoying as well as unjust to producers and dealers who are deprived by it of their normal market for a period. If the boycott is in any way successful in reducing the prices of products to exactly that degree, it is unfair to men who are engaged in honorable business and are in justice entitled to a free and unprejudiced market.

In its ultimate effects the food boycott is more harmful to consumers than to producers. In recent years many persons have told me that they didn't care whether they produced much butter and eggs in winter or not. They said that unless prices were high they could make no money, and if prices were high boycotts would

probably upset their market. "Let the people who boycott our stuff come out and produce it for themselves if they don't want to pay market prices," is a sentiment expressed and a disposition now manifested by some producers.

Let us remember that there are many farmers who are so situated that production is not entirely a matter of necessity but, in part at least, a matter of choice. They can worry along if they don't produce winter eggs or butter. If they are taught by boycotts and agitations that every time the price goes up because of scarcity their product will be blacklisted, they will let costly production alone, or at least make no extraordinary effort to produce when conditions are naturally unfavorable and when special effort is necessary. Consumers want production, but on many occasions in recent years they have tried to take away, and have actually taken away, the greatest incentive to production. This is why boycotts must ultimately harm consumers, and the more successful they are the more harm they do to all concerned.

All this may seem to be far-fetched, but talks with many producers have convinced me that they resent interference with their normal market, and that they may be deterred from efforts to produce by the fear that they will not be allowed to enjoy it. I don't think it ought to be necessary to pet a man to get him to produce foods, but he must have reasonable assurance of a market in accord with conditions. This is true not only of farmers. Even now some of our industries clamor for the aid of the tariff to insure or preserve them a market — and not merely a market according to supply and demand but according to cost of production here and abroad.

Food boycotts are bad enough but not so important in themselves as are the conditions from which they spring. They are, broadly speaking, the result of a lack of understanding. Failure to understand producers and production — failure to understand the fundamental principles of production, trade, and distribution. Along with these things we have some others equally important — false and sensational reports arising from the lack of economic knowledge or sense, from hunger for notoriety and public favor, or, it sometimes seems, from pure cussedness.

Let us look briefly at the genesis of a few boycotts with which I happen to be familiar.

FIG. 16.—E. S. BAYARD

No. 1 was a butter boycott led by society women. They made, and the daily newspapers printed, the most absurd statements about profits of producers, control of the market, Elgin monopoly, storage and held stocks, holders, dealers — everything and everybody in connection with the trade. They taught the people that they were being imposed on, and butter sales dropped off rapidly for a while. When their story became stale to the papers, when they could no longer bask in the limelight of publicity, their interest in the consumer waned. I saw this bunch of women as they posed for photographs for the daily papers. They wore clothes, furs, plumes, and jewels worth more than many a farmer's yearly income. Their leader's automobile tires cost more than many a dairyman's profits on his year's butter.

No. 2 was a "beef strike." It came from the agitation resulting from an advance in the price of beef made of high-priced cattle fattened on high-priced corn. A few "friends of the people" declared that the "trust" had arbitrarily advanced prices, regardless of conditions. This card was played for all it was worth by daily papers, officials and a few statesmen who are always looking for a place in the sun. The result was a sudden reduction in the consumption of beef and a decline in the price of cattle which had cost somebody big money to fatten on high-priced corn. Nobody was benefited much and grave injustice was done to those who had fed their cattle the expensive corn in expectation of a fair market.

No. 3 is this egg boycott, so sensationally begun, so much discussed for a few weeks, so ingloriously ended after some disturbance of trade. Its history I need not further mention, but back of all boycotts and food agitations there are a few things I want to discuss briefly.

I have said that lack of understanding is the primary cause of much food agitation and some legislation, which will be wiped out when the people come to their senses.

Let us not blame the people for this, but let us fix the responsibility where it belongs. The people of our cities are not like they were a hundred years ago, when all city folks knew something of the country too. Our city folks are now ignorant of the courses and costs of production, preparation, and distribution of foods. They know well only one thing about foods — the price.

They do not know how to reduce that price by legitimate cooperation, direct dealing, or any other way. They are therefore bound by ignorance, by habit or custom, and often by the need of credit. Let us view their acts with charity in the belief that they are misled.

But what shall we say of those who assume to lead the people? They can and should know the fundamental principles of production, preparation, and distribution of foods, and the various influences that enter into costs and prices. But the deplorable fact is that they neither know these things nor seem to want to know them.

No story in regard to foods and their control is too absurd to get a headline in our newspapers. Opinions of men grossly ignorant of facts are printed as facts. No effort is made to ascertain facts from those who know them. Sometimes when facts are presented they are turned down and some sensational statement, utterly false, is printed. Education in plain economics is more needed in our newspaper offices today than anywhere else on earth because of the influence these papers have on public opinion. It is true that there are some exceptions to this rule — conspicuous by being so few — and to those few we should give due credit. By their lack of economic sense our papers have wronged both producers and consumers of foods. Are not these blind leaders of the blind partly responsible for much of our food agitation and for the lack of food education?

Our public officials have not been much behind the newspapers in misleading the public. The very call for this meeting contained this sentence: "The venerable State Agricultural Society is taking on new life in the presence of the acute situation in the food crisis and the forbiddingly high prices exacted by speculators and greedy dealers for nearly every article used in the household." There we have it — suggestion, even assertion, that "speculators" and "greedy dealers" are responsible for prices resulting from the immutable law of supply and demand.

What shall we say of the city official (Mr. Hartigan) who fans the flame of discontent by stating that farmers are concealing their food supplies? Think of the monumental ignorance revealed by such a statement! This official seems to think that farmers are keeping their potatoes under the pillow, their eggs in stockings, and their live stock in subcellars. Yet his statement was published

in daily papers that I happened to see in three cities at least — New York, Pittsburgh, and Chicago.

Another official, Mr. Dillon, has reiterated a pet statement about the cost of distribution until he apparently believes it himself. The 65-cent cost and the 35-cent dollar is an economic falsehood, and the more deplorable because it misleads both consumers and producers. Long ago its absurdity, and indeed the absurdity of attempting to fix any constant percentage cost of distribution of foods, was shown beyond peradventure. Yet within a few weeks he has more than once stated it as a fact and the papers of your metropolis and state have published it as a fact. However, let us pay due tribute to the miraculous mathematical ability which can figure two constant percentages from an always shifting base.

What shall we say about those who add to the sum of human discontent and distrust by calling distributors of food “a pack of thieves,” or accuse them of “fattening off the necessities of the people,” and so forth. The middlemen are no pets of mine — I know they are not all 40-horse-power angels. But is that any excuse for abusing a class of men engaged in honorable business, and trying to teach the people by such abuse, misrepresentations, fallacies, and appeals to passion that foods are dearer because those who handle them are criminals, and that the people are the victims of these criminals?

I hold that papers, officials, and others who perpetrate these things are responsible for food boycotts and agitations that are contrary to the interests of all concerned. Such men may profess that they are not in favor of boycotts, but we can't escape the conclusion that those who so mislead the public are responsible. Such examples as the above might be multiplied. But these are sufficient to illustrate the point I make, that we have too much misinformation, too many “words without knowledge,” and too little knowledge among those who mould public opinion in regard to food problems. And these examples are here at home. I have not dragged in any horrible examples from the outside, though I could do so.

What shall we teach? That is a proper question and I shall devote a little time to it. First, let us teach fundamental principles and facts as to production, manufacture, and distribution of foods.

Second, let us provide practical economic education in our high schools and colleges, and if possible in our press. One of your own citizens said, "We are a country of economic illiterates. I know of no illiteracy more dangerous to the welfare of the commonwealth."

Now for a few other things we should know and teach.

CONTROL

It is often charged that food supplies are controlled and prices fixed arbitrarily. Let us remember that the production, marketing, and prices of foods are governed by the laws of nature and trade — not by combination, monopoly, speculation, or any other arbitrary means. All may be bought or sold or stored by anyone who is financially responsible. The abundance of capital awaiting profitable investment and the number of men willing to risk it for profit will always provide a substantial safeguard against oppressive food trusts of all kinds.

SPECULATION

This is often but erroneously blamed by producers and consumers alike. But for the speculators, who help to finance, move, manufacture, and store our crops, costs would be increased rather than diminished.

STORAGE

This is speculation and it is also a means of preserving a surplus for a time of need. No one is going to do this and provide food supplies without the incentive of profit, which is at the bottom of the whole business of storing foods. Foods bought on the open market, stored in public warehouses, and sold on the open market are entitled to whatever price that market pays, be it high or low. What we want to do is to quit cussing cold storage and go to using it. Consumers should be taught that the markets are open to them on the same terms as to others; that storage facilities may be had by them at the rate as that given to anybody else; and that they may, if they wish, cooperate in buying when stuff is cheap and storing until a time of scarcity, just as anybody else can.

MIDDLEMEN

Our system of marketing is not perfect. It is the outcome of centuries of experience and experimenting. During those years the desire for profit has sifted out some things and established others. The middleman has been found an economic necessity and he will be so in the future. He performs a service for consumers and producers which neither class thus far has been able to perform for itself. This service costs something. It may cost too much, and we are told that multiplication of middlemen is the cause of this cost. It is evident that this is not correct. Several middlemen may cost little; one may cost more than all the rest of a group or more than four. Much depends on the character of the product, perhaps more than on the number of men between producer and consumer. The elimination of any waste or cost should be an object in all business, and the food business is no exception. This may be done by eliminating service if it is possible; or by performing the same service in another and cheaper way; or by attending to that service ourselves. We should teach that cooperation to perform service may reduce cost of marketing and narrow the gulf between producer and consumer; also that whenever consumers demand less service they will buy cheaper — but they seem to demand more and also to forget that they must pay for it. Let us show that cheaper ways do not come by hysteria, by maligning middlemen, or by demanding more service of them.

BIG BUSINESS

Our papers have taught and our people have come to believe that big business is necessarily oppressive and costly. The reverse is true. No smaller slaughterer can do business on a 2 or 3 per cent margin as big business can do and prosper. Let us teach that the greater the number of pounds or measures handled, the smaller the necessary charge against each of them. In other words, let us teach the true economy of business and not inspire prejudice against that which reduces costs.

OPEN MARKETS

Let us teach the people that the food markets are open to them or to their representatives if they want to cooperate and buy in bulk. Let us show them the possibilities of such cooperation, if we can, now while they are concerned about the price of foods.

PROGRESS

Let us ourselves not assume that any present system is perfect, nor let us assume that legislation can be enacted to make it so. Education, development of cooperation between classes, a fairer understanding of food facts, are worth more than all the legislation ever proposed or enacted in relation to the high cost of living.

No legislation is going to "regulate" food prices.

No legislation is going to change our habits and customs.

No legislation is going to abolish the middleman or speculator.

No legislation is going to supplant the old law of supply and demand.

No legislation is going to restore the labor to farms or farm homes.

No legislation is going to give us back our wasted fertility.

No legislation is going to make a hen lay or a cow have twins.

In the above there is nothing new or strange, but some things that seem to have been forgotten in the hysteria over the cost of foods. This hysteria will ebb and flow with production and prices. But let us keep a firm hold on the principles of trade and examine carefully the methods now in use. When we have done all this we will not be so cocksure that we know better ways. In fact we may find a few things that will surprise us — and show us that we know less than we thought.

Some of you will call this a stand-pat policy and clamor for more "progress." I believe in being a stand-patter when I stand on the firm foundation of truth and common sense. What we call progress is often merely shiftiness, evasion, or distortion of facts, ignoring of fundamental principles, or inciting prejudice or passion.

Let us not close our eyes to new and better things, sound in principle and economical in practice; but let us remember at the same time that new things must be sound in order to survive.

THE PRESIDENT: Mr. Bayard says he is a breeder of cattle. It seems to me that he is a breeder of common sense. I for one have learned much from his talk and want to thank him.

We have all been interested in the work of the Dairymen's League. I take pleasure in introducing to you Mr. R. D. Cooper, president of the State Dairymen's League.

WHAT THE DAIRYMEN'S LEAGUE IS DOING

R. D. COOPER

The Dairymen's League is a stock company, organized under the laws of New Jersey. It has been in existence about nine years and is composed of about 600 branches with 33,000 stockholders, representing 400,000 cows. Its activities cover New York State; the western borders of Connecticut, Massachusetts, and Vermont; and the northern tier of counties of Pennsylvania, northwestern Pennsylvania, and northern New Jersey.

The purposes of this company shall be to oppose and prevent monopoly in the production or sale of milk and to encourage competition therein, and to protect its stockholders and the consumers of milk against monopoly or any unlawful combination of any kind or nature whereby the producers or consumers of milk are injuriously affected, to promote legislation and board of health ordinances beneficially affecting the interests of its stockholders who are producers of milk for the metropolitan district and other markets, to act as their agents in marketing their products and to carry on all such business as its articles of incorporation authorize.

Should the directors be unable at any time to negotiate equitable conditions of sale of the milk from the local branches of the league at a price proportionate with the cost of production of pure unadulterated milk produced under conditions properly to safeguard the public health, each member shall be so notified, and in such an emergency it shall be optional with each local branch of the league whether its members manufacture their milk at home or at a place provided and operated by the local branch.

Should the conditions of any local branch be such that milk cannot be sold profitably by the board of managers, they may authorize the sale of such milk, making due allowance for such local conditions.

The Dairymen's League is attempting to carry out the purposes for which it was incorporated, in so far as it is able with present facilities at hand.

When peace terms were agreed upon, October 14, 1916, the league found itself a large corporation, doing millions of dollars' worth of business without adequate offices, clerical force, equipment, or system.

The continuation of organization work is considered of primary importance and we now have an efficient department with a corps of experienced men at work extending the league, rounding it out, strengthening the weak places, and moulding it into a more perfect and solid organization.

When the league announced its prices last September, it did so after careful consideration, and believed the prices set were about equal to the average cost of production. The fact that milk companies are now paying more than the league price in many cases, would indicate that the company had made a serious blunder. There may be several reasons for this condition. The present market condition with its contributing factors may be the cause of the present situation and only serves to emphasize the difficult task which the league has before it. It goes to show that we are not experienced in the art of boosting prices.

The league is today selling milk for less than the cost of production and its members are trying to make money supplying it on that basis. However, the league has been in a large measure successful in securing better prices, and in view of the fact that it was able to secure for its members forty-five cents per hundred increase above the corresponding prices last year, is an indication that the producer is approaching somewhat nearer to that to which he is entitled. And, if he is willing to stand a little loss, the feed dealers and milk companies are equally willing to absorb it.

Probably one of the most difficult tasks before us is to make the milk companies live up to their contracts and agreements, which they have made with the league. Those more or less acquainted with these companies know we are attempting well nigh the impossible. In view of the fact that the state is unable, or fails, to make these companies comply with the law, we can say that the league is not weary in well doing. An equally difficult task is that of satisfying every one of its 33,000 members. Taking into consideration that the satisfying of its members is governed to the extent to which the companies live up to their contracts, and that the number of complaints are very small as compared with the violations of agreements, we are led to draw the conclusion that we are in a measure approaching perfection, but never with the expectation of reaching it — "verging on, but not yet."

FIG. 17.—R. D. COOPER



I doubt if the combined wisdom of Solomon and the ability of the prophets of old could answer the questions that have been placed before the league's executive.

"Is the Wicks Committee going to legislate Dillon out of office?"

"Would it do any good to write the Governor?"

"What will be the price of milk after April 1?"

"Has the dealer any right to put C milk and B milk in the same vat and sell it for B?"

"How can a dealer sell A milk from a B plant?"

We have been told that the Dairymen's League is an illegal corporation. Some say the league openly violates the law every day. One's attitude toward a mad bull is very likely to be determined by the side of the fence on which one happens to be. There is no law that I know of that can compel a farmer or a group of them to sell milk to the New York City milk dealers at less than the cost of production. If, perchance, there is such a law, and it is enforced for a period of duration, the consumers of milk in New York City will be under the necessity of securing legislation compelling farmers to keep cows and more of them in order to produce more milk to sell to the dealers at a greater loss. Perhaps if New York State had a farmer legislature, as is the case in some states, it would have legislation prohibiting New York City from drinking anything but milk and compel it to drink twice as much milk as it does now and at double the price. Possibly such a legislation might be more beneficial and as reasonable as some of the legislation at the present time.

The Federal Government and the state spend money teaching the farmers the advantages of cooperation. After the farmers have spent time and some money, if they have any, in perfecting such an organization and it is ready to do something, they start for New York only to find that at Albany their hopes are dashed to pieces by a head-on collision with the Donnelly Act. They then realize, if they have ever been incorporated under the cooperative act of this state, that all restrictions over corporations of all kinds applies also to their cooperative company and that, if their company has been able to do business and accumulate any profits, they would not know how to dispose of them except giving most of them to someone else.

The Bureau of Markets and Rural Organizations at Washington last year spent considerable time trying to work out a cooperative plan for marketing the milk from the farmer-owned milk plants. After the plan had disengaged itself from its barbed wire entanglements of red tape and had run the gauntlet of the Federal Legal Department, it was then sidetracked for fear of being punctured by the machine gun of the Donnelly Act.

The Dairymen's League has withstood searching fire of the milk companies, and if there had been many weak spots the "tank" would have been disabled. The charter of the league is very broad. However, murder is not legalized, nor is theft permissible. It was reported that last October one or two men nearly met death by accidental drowning in milk. In its struggle, the league established the principle of collective bargaining, which was of equal if not more, importance than the question of price. The league is making secure the ground which it has gained. It is collecting reliable data upon the question of production of milk, so that when the time comes it will have definite facts upon which to base its price. The league hopes to purchase for its stockholders in the near future feed, seed, machinery, and all of the more important things needed in their business. The league hopes to market for its stockholders not only milk, but farm products that they may have for sale. The league is now making arrangements for the publication of a monthly paper which will be placed in the hands of every stockholder for the purpose of keeping him in touch with its activities and conditions and spreading information. The league should, in due time, have its own banking facilities.

The New York Milk Committee, born already educated, sits at the Court of Minerva, and detects an odor. The New York Board of Health divines that it comes from the Augean stables upon the farms from which some of the lacteal fluid is produced which supplies some of the life-giving elements to the inhabitants of its city.

The kid-glove inspectors are sent far and wide into the country to perform the Herculean task of cleaning the supposed Augean stables. These messengers bearing a sign of "Safety First," find a cow with grubs in her back, and forthwith order the owner to make away with her at once and reject milk from the entire herd — because any cow that has grubs in her back is tubercular. The

barn must be rebuilt at once, having not less than a quarter of an acre of plate glass and finished in marble. If the farmer, perchance, is supposed to have a few dollars laid away for a rainy day, it is rumored about that he will have to build a new barn before his milk can be accepted by any company supplying milk to New York City.

This representative of the city's health department has perhaps lost the scent of the trail on which he was placed, or, if not, and if he is persevering he can find the source of the odor at some cheese factory of which he has never known before, situated miles off the beaten thoroughfare along which New York City's milk supply is drawn, back at the border of the woods where some company has been able, when possibly milk is selling for \$4 a can in New York City, to pick up a quantity of cheap milk.

Cyclopean milk companies have ravaged and plundered this country, using as their club the barn score card of the board of health. Is it possible that the scoring of a producer's barn may be in any way affected by the quantity of milk which the company wishes to handle?

The New York Milk Committee suggests to the board of health that the best grades of milk, many times taken from the same vat as other grades, have exceedingly low bacteria count, not taking into consideration that milk of low bacteria count may contain therein deadly germs, and that milk containing a large number of bacteria may be harmless.

If the New York State requirement for milk is 3 per cent, then milk dealers should not be allowed to sell milk with less than 3 per cent butter fat and it should be milk. If the health of New York City is dependent upon the inspection of the territory from which its milk is produced, why, then, is milk allowed in New York City from territory which is not inspected and some companies be allowed to bring milk into New York City from uninspected territory with impunity? There is something rotten in the state of Denmark!

The league demands for its members fair play and what belongs to them. We believe that the state should either cease its cooperative propaganda or amend its conflicting laws. We believe that the sediment disc should be an indicator as to whether or not the

condition of the barn or the methods of the producer need attention. We believe that if there is to be a required standard under which market milk is to be produced, that standard should be set by law and the enforcement of it should be in the hands of a disinterested and impartial person, and that when milk is produced under the prescribed requirements such milk shall be fit for any market. We believe that if milk is to be purchased on the basis of butter-fat content, that the determination of that butter-fat content should be in the hands of a disinterested and impartial person.

The date, October 14, 1916, marks the time when the slaves that have always produced New York City's one necessary article of food were emancipated. The milk producer has secured for himself—and, let us hope, for all time—that inherent and fundamental right of every American citizen, which is to set the price on his own labor. In this atmosphere of liberty, secured by release from the laws of the Bordens, the edicts of the Sheffields, and the inquisitions of the Stevens, to say nothing of the practices of other companies, many, as indicated by questions, are as animals released after long captivity.

The league is paving the way for the milk producer so that he may have the necessary comforts of life; so that he can stand erect in the position in which he was created to stand, occasionally, during the day, looking at the blue sky and rejoicing in the glories of the canopy beneath which he lives and moves and has his being; that his faithful wife may be set free from a life sentence of hard labor; that they may walk through the streets of this or any other city without the finger of scorn being pointed at them and without being objects of curiosity; that they may walk through the halls of this Capitol which their life blood has helped to build and dare look into the senate and assembly chambers filled with graven images, and do so without fear and trembling; that their children may have proper clothing, be trained in our best schools and have at least equal advantages with the children of the scum of Europe and not be likened, on account of their personal appearance, clothed in rags and with unkempt hair, to those beyond the pale of civilization.

THE PRESIDENT: I thank you very much, Mr. Cooper. I am sure we are all very glad to have listened to Mr. Cooper's address.

I think that each and every speaker we have had at our meetings is indebted to our thanks and deep appreciation. I wish also to call attention to the fact that the Commissioner of Agriculture of the state of New York has worked with us in harmony during the entire year, has placed his office at our disposal at any time we needed it, and I do not think it would be out of place if a vote of thanks came from this body to him for his earnest interest and hearty cooperation.

MR. COLE: I would move that a proper resolution of thanks and appreciation to the speakers before the society at this convention be prepared and transmitted to each of the speakers and to the Commissioner of Agriculture for his courtesy and cooperation.

Carried.

THE PRESIDENT: I wish to thank each and every one of you, members and friends of this society, for your attendance, your splendid interest, and your hearty cooperation, and I hope that cooperation will continue after this meeting has been adjourned; we want your help and assistance throughout the year.

MR. SCHRIVER: I wish we might somehow get united action so that we would work through the officers of this society, so that the executive of the state might not be able to come before us a year hence and say that we were divided, that we did not agree. We ought to have a well-defined policy. I wish if we have any suggestions or any statements or any convictions we think ought to be worked out for the benefit of the community or the state, we might communicate with the officers of the society and get the thing clear at the head so that it may be presented to the legislature, the governor, or anybody else, with the authority of the whole body.

THE PRESIDENT: I wish to say along this line that your officers will be very glad at any time and at all times to receive suggestions, to receive letters containing suggestions or information from any of the members, and we would be very glad to give them consideration and to work together. I might say for your information that

practically every bill that was introduced last winter in the state legislature affecting agriculture was obtained by your officers. The bill was considered. We did not rush before the legislature in regard to every bill presented, but we considered every bill; and those that we felt should not be passed we opposed and opposed in the name of the society. Bills that were of value to the agricultural interests, we favored and assisted; and I believe that I can safely say that no bill passed which your officers in the name of the society opposed, and no bill which this society favored failed to pass and become a law.

MR. C. W. BURKETT: I move we do now adjourn subject to the call of the chair.

Carried.

LIFE MEMBERS

A

Abell, Flavel L., Phoenix.
 Acker, Milo M., 126 Main St., Hornell.
 Akin, Elwood S., Glens Falls.
 Aldridge, A. E., E. Washington St.,
 Syracuse.
 Alexander, W. A., Union Springs.
 Allen, Frederick H., Pelham Manor,
 New York.
 Allen, George W. H., Cazenovia
 Allen, Gorton W., Auburn.
 Allen, Irving W., East Syracuse.
 Allis, Clark, Medina.
 Amos, Jacob, 200 E. Genesee St.,
 Syracuse.
 Anderson, John B., Geneva.
 Andrews, Charles D., Camillus.
 Andrews, Frank H., 206 Emerson
 Ave., Syracuse.
 Andrews, James M., Warner.
 Andrews, T. E., Camillus.
 Andrews, W. R., 1818 W. Genesee
 St., Syracuse.
 Appleton, Francis H., 251 Marl-
 borough St., Boston, Mass.
 Armstrong, C. M., Homer.
 Arnold, Wm. A., 603 Irving Ave.,
 Syracuse.
 Atherton, Edw. D., 1109 Avery Ave.,
 Syracuse.
 Atwater, C. G., 17 Battery Place,
 New York.
 Auer, Michael, 210 E. Castle St.,
 Syracuse.
 Averill, Charles S., Yates Hotel,
 Syracuse.

B

Babcock, Hiram W., R. 1, Auburn.
 Backus, Rufus N., 866 Lancaster
 Ave., Syracuse.
 Bailey, L. H., Sage Place, Ithaca.
 Bain, Alonzo, Kennedy.
 Baker, Fisher A., 440 N. Broadway,
 Yonkers.
 Ball, Calvin S., 200 Delaware St.,
 Syracuse.
 Banning, Walter E., 1001 E. Fayette
 St., Syracuse.
 Barber, James J., Box 512, Syracuse.
 Barclay, Robert C., 299 Broadway,
 New York.
 Barlow, A. G., Medina.
 Barnabas, Rev. Bro., 500 Rutger St.,
 Utica.
 Barnes, George M., 414 W. Onondaga
 St., Syracuse.

Barrett, James R., Cazenovia.
 Barrus, E. R., 117 Peck Ave., Syra-
 cuse.
 Barry, Thomas G., 2 Rector St., New
 York.
 Batten, George, 381 Fourth Ave., New
 York.
 Beal, George, Hamilton.
 Beard, Robert H., Cortland.
 Beckwith, Dwight S., Albion.
 Belden, Alvin J., 621 W. Genesee St.,
 Syracuse.
 Belden, James Mead, 618 Genesee St.,
 Syracuse.
 Beley, Fred, 700 Wolf St., Syracuse.
 Bell, David K., R. 6, Rochester.
 Benham, E. M., R. 2, Canandaigua.
 Benham, Murray, R. 2, Canandaigua.
 Best, William, 81 Elizabeth St.,
 Ogdensburg.
 Betts, S. T., 332 S. Salina St., Syra-
 cuse.
 Bibbins, J. W., Weedsport.
 Bicknell, J. Y., 314 Vermont St.,
 Buffalo.
 Bigelow, Otis M., Baldwinsville.
 Bill, James R., 37 Greene St., Ogdens-
 burg.
 Billington, B. H., Bastable Block,
 Syracuse.
 Birge, James C., 109 Montgomery St.,
 Ogdensburg.
 Bisdell, Edward L., Baldwinsville.
 Black, J. W., 136 N. Salina St.,
 Syracuse.
 Blessing, Fred S., Slingerlands.
 Blodgett, F. H., 308 S. Clinton St.,
 Syracuse.
 Blunk, A. E., Nampa, Idaho.
 Bogue, Nelson, R. 2, Batavia.
 Bondy, Joseph, 112 Waverly Ave.,
 Syracuse.
 Bonta, F. M., 514 James St., Syra-
 cuse.
 Boshart, C. Fred, Lowville.
 Bowditch, Edward, 40 Willett St.,
 Albany.
 Boyington, H. H., 1501 N. Salina St.,
 Syracuse.
 Bradley, Chris C., 432 N. Franklin
 St., Syracuse.
 Brainard, C. G., Waterville.
 Brandow, Augustus S., 188 Washing-
 ton Ave., Albany.
 Brayton, W. E., 1117 W. Fayette St.,
 Syracuse.
 Breed, Eugene, Memphis.

Breese, Wellington E., Trenton, N. J.
 Brewster, S. Edward, 171 Park Ave.,
 Rochester.
 Briggs, E. W., Medina.
 Brill, G. D., Bedford Hills.
 Brisbin, C. S., Schuylerville.
 Brockett, Henry E., Little Falls.
 Brodie, William A., Geneseo.
 Brower, F. C., 317 E. Genesee St.,
 Syracuse.
 Brown, A. E., Syracuse.
 Brown, Almer J., 942 Oakland Ave.,
 Toledo, Ohio.
 Brown, Charles J., Winton Road N.,
 Rochester.
 Brown, J. Emery, West Ave., Oneida.
 Brown, Jesse, jr., 314 Shelton Ave.,
 Jamaica.
 Buchanan, Charles J., 79 Chapel St.,
 Albany.
 Budd, S. Emory, Newark.
 Burden, I. Townsend, 65 E. 78th St.,
 New York.
 Burhill, W. Roy, 23 E. 26th St., New
 York city.
 Burkett, C. W., 315 Fourth Ave., New
 York.
 Burn, M. T., Tilsonburg, Ontario,
 Canada.
 Burrill, H. L., Weedsport.
 Butler, E. K., 806 W. Genesee St.,
 Syracuse.
 Button, R. D., Canastota.

C

Cady, John E., 335 W. 28th St., New
 York.
 Campbell, David, Syracuse.
 Campbell, John S., Utica.
 Carl, Ira, 23 E. Genesee St., Auburn.
 Carlin, Walter Jeffries, 2 Rector St.,
 New York city.
 Carter, George F., 1240 N. Salina St.,
 Syracuse.
 Carter, John S., 5553 Drexel Ave.,
 Chicago, Ill.
 Case, Henry J., Auburn.
 Catchpole, E. W., North Rose.
 Chadderton, Isaac Weedsport.
 Chamberlain, Olcott A., Richfield
 Springs.
 Chandler, Harvey G., 151 Lake St.,
 Ogdensburg.
 Chandler, Webster L., 54 Franklin
 St., Ogdensburg.
 Chapman, Clark E., Freeville.
 Chapman, E. H., 17 W. 42d St., New
 York.
 Charles, H. H., 23 E. 26th St., New
 York.
 Charles, Richard S., Belmont.

Chase, Col. A. C., Comstock Ave.,
 Syracuse.
 Chase, A. S., Baldwinsville.
 Chase, Carleton A., 201 Prospect
 Ave., Syracuse.
 Chase, R. G., Geneva.
 Cheney, Walter W., Manlius.
 Clancy, J. R., 819 W. Genesee St.,
 Syracuse.
 Claris, Dr. John T., 629 Clinton St.,
 Buffalo.
 Clark, B. Wheaton, Lockport.
 Clark, J. Elmer, 1844 S. Salina St.,
 Syracuse.
 Coakley, Daniel, Solvay.
 Coats, H. P., Saranac Lake.
 Coe, R. E., Kirkville.
 Cogswell, Ledyard, 318 State St.,
 Albany.
 Cogswell, P. J., R. 6 Rochester.
 Cole, Charles C., Jordan.
 Converse, Frank A., 76 St. James
 Place, Buffalo.
 Converse, George H., Woodville.
 Cook, Elisha, Poplar Ridge.
 Cook, H. E., Canton.
 Cook, Herbert J., South Granby.
 Cook, Sidney H., Camillus.
 Cooke, Roland C., 2818 State St.,
 Milwaukee, Wis.
 Cooley, A. H., Little Britain.
 Coolidge, Charles, Clifton Springs.
 Coonley, Irving, Cicero.
 Cooper, H. A., Wolcott.
 Cooper, James F., 96 Western Ave.,
 Albany.
 Corbett, L. C., Department of Agri-
 culture, Washington, D. C.
 Cornell, Charles Ezra, Ithaca.
 Cornell, Charles P., 15 Clinton Block,
 Syracuse.
 Cotton, George G., R. 1, Camillus.
 Cowee, Arthur, Berlin.
 Cox, William B., Plainville.
 Cramer, Olin, Baldwinsville.
 Crandall, William DeLoss, West
 Edmeston.
 Crandall, William G., Homer.
 Crawford, A. H., Liverpool.
 Cronin, Mrs. Annie B., 207 W. Borden
 Ave., Syracuse.
 Crossman, Charles W., 903 Monroe
 Ave., Rochester.
 Crossman, H. D., Weedsport.
 Cullinan, P. W., 333 W. Third St.,
 Oswego.
 Curry, Edmund J., 28 E. 95th St.,
 New York.
 Curtis, Edward F., 123 W. Onondaga
 S., East Syracuse.
 Curtis, J. G., Ghent.

D

Daboll, Charles E., Memphis.
 Darrow, M. C., 1703 Milton Ave., Solvay.
 Davis, Dr. Boothe C., Alfred.
 Davis, Dr. Charles E., 15 Washington Ave., Albany.
 Davison, G. Howard, Millbrook.
 Dawley, F. E., Fayetteville.
 DeGraff, Alfred, Fonda.
 Denniston, Augustus, Washingtonville.
 Dewey, C. D., Niagara Falls.
 Dickinson, Austin R., 720 W. Genesee St., Syracuse.
 Dillon, John J., 204 Franklin St., New York.
 Dolbear, F. H., Fulton.
 Dolbear, Martin E., Fulton.
 Donnelly, P. H., Cazenovia.
 Doolittle, L. F., Ouaquaga.
 Dorchester, Robert E., 111 Cayuga St., Syracuse.
 Downer, Ezra, Brewerton.
 Downs, Arthur L., Mattituck.
 Duffy, Hugh, Cortland.
 Dunn, Thomas, Syracuse.
 Dunning, David M., Auburn.
 Dunning, William D., 329 W. Water St., Syracuse.
 Durston, J. F., 505 W. Genesee St., Syracuse.
 Dusenbury, E. G., Portville.
 Dutcher, J. Gerow, Pawling.
 Dyer, Marshall R., Syracuse.

E

Earle, C. P., Gouverneur.
 Earll, J. Horatio, Skaneateles.
 Eastman, A. R., Waterville.
 Ebeling, F. H., Gouverneur.
 Eckenberger, Haman, 1040 Pennsylvania Ave., Elmira.
 Ecker, George D., 1507 Milton Ave., Solvay.
 Edwards, Ira, Holley.
 Ellis, Earl E., Camillus.
 Ely, L. D., 82 E. Boulevard, Rochester.
 Everson, Charles B., 21 Everson Bldg., Syracuse.
 Everts U., R. 49, Cato

F

Fage, William C., Syracuse.
 Fairchild, George W., Liverpool.
 Fairchild, Herman, Liverpool.
 Fairchild, Merritt B., 1500 N. Salina St., Syracuse.
 Fairchild, Ransom, Liverpool.

Farrell, James C., 100 State St., Albany.
 Farrington, Barney, 1118 E. Railroad St., Syracuse.
 Farrington, Harvey, 485 N. Broadway, Yonkers.
 Fay, Ernest A., Potsdam.
 Ferris Charles C., Box 693, Syracuse.
 Ferris, Hon. T. Harvey, 1107 Sunset Ave., Utica.
 Fenton, H. N., Morley.
 Findlay, James A. D. S., Salisbury Mills.
 Fisher, Conrad J., Minoa.
 Fisher, John C., Madrid.
 Fiske, Charles H., R. 1, E. Syracuse.
 Fitzgerald, Lawrence J., Auburn.
 Flinn, G. D., Union Springs.
 Forey, John H., 133 Wood Ave., Syracuse.
 Forrister, W. E., Hammond.
 Forsyth, James, Owego.
 Foster, Isaac H., Baldwinsville.
 Fox, P. W., Canton.
 Foxton, H. C., R. 4, Syracuse.
 Frank, Nathan, 64 Green St., Ogdensburg.
 Frazer, Frederick, 603 James St., Syracuse.
 Frey, William F., 1025 Lodi St., Syracuse.
 Fugett, J. M., Waterloo.
 Fullerton, H. B., Medford.
 Fullerton, Edith L., Medford.

G

Gardiner, E. V. M., Pine Island.
 Gardner, A. L., Gunston, Va.
 Gates, A. R., Liverpool.
 Gates Francis H., Chittenango.
 Gates, John W., Chittenango.
 Geballe, Isidore H., San Francisco, Cal.
 Gere, Irving N., 535 Oak St., Syracuse.
 Gere, William A., 1407 Milton Ave., Syracuse.
 Gerow, John Y., Washingtonville.
 Gibbs, Charles M., 320 W. Fayette St., Syracuse.
 Gibbs, Charles M., jr., 320 W. Fayette St., Syracuse.
 Giddings, F. N., Baldwinsville.
 Gilbert, James M., 905 Walnut Ave., Syracuse.
 Giles, W. N., Skaneateles.
 Gillette, E. C., Penn Yan.
 Gillett, Harris, Unadilla.
 Godfrey, Frank N., Olean.
 Gorham, William B., Camillus.
 Gould, James F., Warner.

Grace, Thomas J., 863 Emerson Ave.,
Syracuse.
Gray, William H., 611 Hickory St.,
Syracuse.
Green, Charles A., 25 Highland Ave.,
Rochester.
Green, Willis H., Belleville.
Greene, J. F., Waterford.
Gregory, George F., Dummerston,
Vermont.
Groat, John A., Castleton.
Guthrie, Edward A., Athens.

H

Haberle, Frank B., 802 McBride St.,
Syracuse.
Hadden, J. B., Pulteney.
Hall, C. John, Peterboro.
Hall, F. G., Dansville.
Hall, George, Ogdensburg.
Hall, John B., R. 9, Canandaigua.
Hallock, J. H., Saranac Lake.
Hanchett, Charles G., 211 W. Fayette
St., Syracuse.
Hand, Henry M., Lyndonville.
Harder, Edward L., Philmont.
Hardy, D. P., Union Springs.
Hardy, Elias, 7 Howard St., Auburn.
Harmon, A. B., Weedsport.
Harmon, John S., Box 1024, Ash-
tabula, Ohio.
Hasbrouck, Louis, 66 Caroline St.,
Ogdensburg.
Havens, Charles H., R. 3, Hannibal.
Haviland, Mrs. William G., Johnson-
ville.
Hawkins, E. T., 302 Summit Ave.,
Syracuse.
Hawley, Mrs. Estelle F., Pittsford.
Hawley, George W., Warner.
Hayden, William, McDonough.
Hayhoe, James H., 1861 W. Fayette
St., Syracuse.
Heaton, Dr. C. E., Baldwinsville.
Helyar, F. G., Morrisville.
Henderson D. W. 381 4th Ave., New
York city.
Hendricks, Francis, 644 W. Onondaga
St., Syracuse.
Henning, Charles S., 23 E. 26th St.,
New York city.
Herber, John, Elsmere.
Hill, D. Munro, Elbridge.
Hilton, James, Slingerlands.
Hilton, Joseph, Slingerlands.
Hinsdale, Alfred L., Camillus.
Hiscock, Frank H., 930 James St.,
Syracuse.
Hitchcock, C. P., McGraw.
Hoag, Harvey, Barker.

Hoag, Ira W., Quaker Hill.
Hodges, Frank B., 107 Waverly Ave.,
Syracuse.
Hoffman, W. H., R. 4, Syracuse.
Holbert, George W., River Road, El-
mira.
Holden, E. C., McGraw.
Holden, H. S., 1100 James St., Syra-
cuse.
Holihan, T. E., 1101 Milton Ave.,
Syracuse.
Hope, J. L., Madison, N. J.
Hopkins, William E., 512 E. Jefferson
St., Syracuse.
Horton, Loton, 177 W. 77th St., New
York.
Hotaling, D. B., Jamesville.
Hotchkiss, Alfred J., Syracuse.
Howe, Edgar D., Weedsport.
Howe, Lewis B., Jordan.
Howell, Charles W., Riverhead.
Howell, Fred B., Medina.
Howlett, Ames W., 309 Plum St.,
Syracuse.
Hoyt, Frank D., Petersboro.
Hoyt, Lucius B., 233 Hamilton St.,
Albany.
Hubbell, Charles E., 1606 W. Genesee
St., Syracuse.
Hull, Benjamin F., 620 Park Ave.,
Syracuse.
Humbert, Charles E., 114 N. Salina
St., Syracuse.
Humphrey, James R., Heuvelton.
Hun, Marcus T., 31 Elk St., Albany.
Hutchins, Lewis H., Fulton.
Hyde, Salem, 711 W. Genesee St.,
Syracuse.

I

Ingalsbe, Granville M., Hudson Falls.
Ingalsbe, James L., Glens Falls.
Ives, F. O., Schaghticoke.
Ives, Martin V. B., Potsdam.

J

James, Roscoe C., Eagle Bridge.
Jaques, H. M., Lockport.
Jaques, Orman S., R. 9, Lockport.
Jarvis, Ira S., Hartwick Seminary.
Jennings, Dwight F., 116 W. Willow
St., Syracuse.
Jerome, Charles W., Pompey.
Jerome, J. S., Camillus.
Jewett, Henry C., East Aurora.
Jewett, Josiah, Skaneateles.
Johnson, Henry, Camillus.
Johnson, H. N., Belleville.
Johnson, Hugh, Rensselaer Falls.
Johnson, Walter A., 2 W. 45th St.,
New York city.

Jones, Alfred L., Alda Road, Mam-
aroneck.
Jones, Allen M., Camillus.
Jones, Herbert A., 766 Maple St.,
Elmira.
Jones, Lawrence T., 121 E. Pleasant
Ave., Syracuse.
Joy, Edward, 814 W. Genesee St.,
Syracuse.
Judson, Cyrus Field, Ardsley-on-
Hudson.

K

Kanaley, J. D., Weedsport.
Keeler, Edward Elmer, 209 W.
Borden Ave., Syracuse.
Keeler, William H., Albany.
Kelley, Patrick, Watervliet.
Kellogg, O. U., Cortland.
Kemble, Richard L., 519 Pelham
Road, New Rochelle.
Kenyon, George G., 713 Lodi St.,
Syracuse.
Kenyon, Jacob C., Pittston, Pa.
Kevand, David, Weedsport.
Kieffer, Charles, 517 Townsend St.,
Syracuse.
Kincaid, J. F., Syracuse.
Kincaid, James C. P., Menands,
Albany.
King, Ashahel A., Lafayette.
King, Russell G., Lafayette.
Klock, E. M., 206 Lowell Ave., Syra-
cuse.
Knapp, A. A., Preble.
Knapp, C. W., Dewitt.
Knapp, E. H., Fabius.
Knickerbocker, George H., Pine
Plains.
Kosters, C. B., 214 Norwood Ave.,
Buffalo.
Kracke, Fred J. H., 11 Kenmore
Place, Brooklyn.

L

Lacey, Henry, 108 Center St., Syra-
cuse.
Lamb, Anthony, 712 W. Genesee St.,
Syracuse.
Lamphere, J. H., Weedsport.
Lang, Frank, 709 Irving St., Syra-
cuse.
Langdon, Charles J., 303 Main St.,
Elmira.
Langworthy, H., Hamilton.
Langworthy, Irwin, Hamilton.
Lansing, J. Townsend, 103 Washing-
ton Ave., Albany.
Larned, George C., 400 Park Ave.,
Syracuse.
Larwood, Thomas W., 129 Delaware
Ave., Albany.

Latterner, Nicholas, 313 Butternut
St., Syracuse.
Lattin, Frank H., Albion.
Lauman, G. N., Ithaca.
Lawrence, F. M., Bayside.
Lent, L., Staatsburg.
Leonard, Daniel, 56 Willett St.,
Albany.
Levey, John P., Lyndonville.
Lewis, A. F., 712 James St., Syra-
cuse.
Lewis, C. Whitney, 702 Irving Ave.,
Syracuse.
Lewis, John G., Frankfort.
Lewis, Oscar J., Castleton.
Lewis, Otis S., 1721 W. Genesee St.,
Syracuse.
Leyden, Hart C., 1002 W. Genesee St.,
Syracuse.
L'Hommedieu, Wallace, Medina.
Lincoln, O. M., Newark.
Listman, Charles, 611 James St.,
Syracuse.
Little, Charles W., Menands Road,
Albany.
Livingston, John Henry, Tivoli.
Loftis, Henry, 1620 S. Salina St.,
Syracuse.
Long, E. B., White Plains.
Loos, Conrad, 701 Townsend St.,
Syracuse.
Lormore, William J., 201 Walnut
St., Elmira.
Lough, George, Hartwick.
Ludwig, Charles, 1123 Bellevue Ave.,
Syracuse.
Lupton, J. M., Mattituck.
Lyon, Henry, 317 Kirk Bldg., Syra-
cuse.

M

Macomb, John M., Lawrence, Kans.
McCarthy, Dennis, Cazenovia.
McCarthy, M. J., 333 W. Onondaga
St., Syracuse.
McChesney, Albert E., 110 Walnut
St., Syracuse.
McCracken, H. J., Camillus.
McFarran, James A., Cherry Valley.
McGowan, Charles G., Elbridge.
McHarg, John W., 23 Elk St.,
Albany.
McLaury, Charles D., Portlandville.
McNish, Charles W., Ovid.
Mager, George J., Cortland.
Makyes, Albert C., R. 2, Syracuse.
Makyes, E. L., R. 2, Syracuse.
Mallory, Jared, Mallory.
Manning, Albert, Otisville.
Manning, James H., 409 State St.,
Albany.
Manning, Walter H., Saratoga
Springs.

Markham, William G., Avon.
 Marks, Frank, Clifton Springs.
 Martin, L. King, Ogdensburg.
 Marvin, Eugene S., Warner.
 Marvin, George W., Warner.
 Mason, L. C., 608 Turtle St., Syracuse.
 Mattison, C. E., Jacksonville.
 Maxwell, Henry T., Geneva.
 Maxwell, W. T., R. 4, East Syracuse.
 Meade, Fred I., Medina.
 Mullen, Charles R., Geneva.
 Merchant, Abel, Nassau.
 Merrick, Asa L., 249 South Ave., Syracuse.
 Merriman, Charles A., 18 Franklin St., Ogdensburg.
 Merriman, Fred J., Madrid.
 Merritt, Edwin A., Potsdam.
 Mertens, J. M., 102 W. Woods Road, Solvay.
 Miles, Ira C., Eldorado.
 Miller, Basil D., Peterboro.
 Miller, Gerritt S., Peterboro.
 Mills, C. S., Baldwinsville.
 Mills, J. Newton, Weedsport.
 Mitchell, E. D., Tulsa, Okla.
 Moore, Dr. Edward, Loudonville.
 Moore, Frank M., Midland Ave., Syracuse.
 Morris, E. B., Ogdensburg.
 Morton, Hon. Levi P., Rhinecliff.
 Mortz, M. C., Mohawk.
 Moser, C. P., 524 Kirk Bldg., Syracuse.
 Moyer, Burt W., 1400 1st North St., Syracuse.
 Moyer, H. A., 1312 Park St., Syracuse.
 Munro, David H., Camillus.
 Munro, Isaac H., 813 W. Genesee St., Syracuse.
 Munro, John C., Camillus.
 Munro, John S., Camillus.
 Myers, Michael D., 1814 W. Fayette St., Syracuse.

N

Nash, John M. L., 63 Wall St., New York.
 Neal, William H., 332 W. Fayette St., Syracuse.
 Nearing, G. Wells, 203 Kellogg St., Syracuse.
 Newcomb, M. W., Liverpool.
 Newell, Edgar A., Ogdensburg.
 Newell, George A., Medina.
 Newton, William, Henrietta.
 Newton, W. H., 45 Tompkins St., Cortland.
 Nichols, E. E., Marcellus.
 Nichols, Oliver S., Onondaga.

Nivelning, S. T. President, Rochester Ice Cream Co., Rochester.
 Norton, John T., 300 State St., Albany.
 Nott, J. V. Henry, Flushing.
 Nottingham, H. B., Chittenango.
 Nutting, L. A., Syracuse.

O

Ogden, George B., S. William St., New York.
 O'Hara, M. J., Camillus.
 Olmstead, William H., 1024 S. Salina St., Syracuse.
 Olney, Peter B., 68 William St., New York.
 Ormiston, James, Cuba.
 Orr, Robert, DePeyster.
 Osborne, Thomas M., Auburn.
 Osborne, William B., Victor.
 Osborne, William Church, 71 Broadway, New York.
 Ostrander, Homer A., 707 S. Crouse Ave., Syracuse.

P

Page, Levi A., Seneca Castle.
 Paine, Fred B., South Granby.
 Palmer, A. W., 605 University Ave., Syracuse.
 Palmer, George C., 605 University Ave., Syracuse.
 Palmer, James R., Weedsport.
 Parker, Amasa J., 143 Washington Ave., Albany.
 Parker, Myron L., Medina.
 Parks, E. A., 250 McCarty Ave., Albany.
 Parsons, Charles H., 1006 E. Adams St., Syracuse.
 Parsons, Frank M., Weedsport.
 Parsons, Russell D., Fulton.
 Parsons, Willis A., Camillus.
 Patrick, W. C., Jamestown.
 Patterson, Calvin J., Camillus.
 Patton, David H., 11 Ten Broeck St., Albany.
 Pearson, Dr. Raymond A., Ames, Iowa.
 Pearson, R. H., 484 Walnut St., Lockport.
 Peck, Wilbur S., 622 W. Genesee St., Syracuse.
 Peer, Frank S., Ithaca.
 Pellew, Henry E., 1637 Massachusetts Ave., Washington, D. C.
 Pendergast, S. C., Phoenix.
 Penfold, Edmund, jr., 10 E. Fortieth St., New York.
 Perkins, Frederick E., Providence, R. I.

Perkins, J. V., 104 Seymour St., Syracuse.
 Pharis, Henry, 106 Stinard Ave., Syracuse.
 Phelps, Charles S., Homer.
 Phillips, Marcus H., Hulburton.
 Pierson, M. F., R. 2, Stanley.
 Plain, Thomas, Olcott.
 Pollock, William J., Stanley.
 Poole, Theo. L., jr., Dewitt.
 Porter, Charles G., Albion.
 Porter, Dr. Eugene H., Overlook Farm, Upper Lake.
 Porter, Peter A., Niagara Falls.
 Porter, W. W., 1717 W. Genesee St., Syracuse.
 Powell, Edgar A., 805 W. Genesee St., Syracuse.
 Powell, George T., Ghent.
 Prentice, William P., 9 W. Sixteenth St., New York.
 Price, George H., 543 Clinton Ave., Albany.
 Proctor, Thomas R., Utica.
 Pruyn, Robert C., 7 Englewood Place, Albany.
 Puffer, C. C., Avon.
 Putziger, Isador, 1009 Milton Ave., Solvay.

Q

Quackenbush, Earl R., 54 Lenox Ave., Oneida.

R

Ramsdell, Homer S., R. 4, Newburgh.
 Ransom, George F., 1310 Spring St., Syracuse.
 Redfield, Frank B., Batavia.
 Reid, James R., 243 Lake St., Elmira.
 Remington, Clarence D., R. 4, Auburn.
 Reynolds, John H., Albany.
 Rhodes, Almon E., Camillus.
 Rhodes, J. Irving, Scarsdale.
 Rice, James E., 92 Watt Ave., Ithaca.
 Rich, Adelbert P., Cato.
 Richards, C. O., 206 Oakland Road, Solvay.
 Richardson, Harvey W., Cassadaga, Fla.
 Richardson, S. Brown, Lowville.
 Rives, R. W., 319 Fifth Ave., New York.
 Robacher, Mrs. Cassie W., Marathon.
 Roberts, Prof. I. P., 1148 Bryant St., Palo Alto, Cal.
 Roberts, John T., 538 Roberts Ave., Syracuse.
 Robertson, A. K., 4 Ralph Ave., Brooklyn.
 Robinson, Henry J., 54 E. Sixty-sixth St., New York.
 Robinson, John A., 121 Judson St., Elmira.

Robinson, Lewis T., 306 Hamilton St., Syracuse.
 Rogers, Irving P., Manlius.
 Rogers, Julius E., Binghamton.
 Roosevelt, Hon. Franklin D., Hyde Park.
 Roosevelt, Col. Theodore, Oyster Bay.
 Rose, J. Irving, Scarsdale.
 Rowe, Anson H., Feura Bush.
 Royce, Charles H., Enfield Falls Road, Ithaca.
 Rupert, P. G., Seneca.
 Rupert, W. T., Seneca.
 Russell, Charles H., Washington, N. H.
 Russell, Henry, 3 Englewood Place, Albany.

S

Sackett, C. C., Canandaigua.
 Sadler, Russell Z., Syracuse.
 Sanger, William Cary, 88 Wall St., New York.
 Sard, Grange, 397 State St., Albany.
 Saul, Charles F., 747 James St., Syracuse.
 Scatcherd, John N., 703 Delaware Ave., Buffalo.
 Schraub, Fred C., Lowville.
 Schriver, Andrew, Chester, Orange County.
 Schuyler, Philip D., Camillus.
 Schuyler, P. J., R. 1, Camillus.
 Schwartz, Adolph H., 800 W. Genesee St., Syracuse.
 Scott, Harry M., Medina.
 Scoville, J. V. H., New Hartford.
 Seeber, Eli J., Adams.
 Seeley, James, Geneva.
 Seeley, R. F., Waterloo.
 Sessions, F. W., Utica.
 Settle, DeForest, 617 James St., Syracuse.
 Seward, William H., Auburn.
 Seymour, Jay M., Westmoreland.
 Shafer, W. A., Oneonta.
 Sharp, Ira, Lowville.
 Sharra, R. M., Oswego.
 Shea, Dennis E., 211 Erie St., Syracuse.
 Shea, James R., Baldwinsville.
 Sheldon, James, 170 Broadway, New York.
 Sheldon, J. Smith, Weedsport.
 Sherwood, Charles E., Camillus.
 Sherwood, Joseph M., 100 E. Willow St., Syracuse.
 Signor, Isaac S., Albion.
 Simpson, William, 960 Bryant Ave., New York.
 Sisson, George W., jr., Potsdam.
 Slack, Michael, Medina.
 Smead, Dr. C. D., Hector.
 Smith, A. E., Camillus.

Smith, Charles, Baldwinsville.
 Smith, Datus C., Kinderhook.
 Smith, E. E., Syracuse.
 Smith, Enos, Plainville.
 Smith, Frederick W., Syracuse.
 Smith, George A., Geneva.
 Smith, Goldsboro C., Auburn.
 Smith, Grove B., Memphis.
 Smith, H. Cordenia, 1414 E. Genesee St., Syracuse.
 Smith, H. S., East Syracuse.
 Smith, J. William, 1615 W. Genesee St., Syracuse.
 Smith, Martin H., Geneva.
 Smith, Miles, Baldwinsville.
 Smith, Miles Homer, Baldwinsville.
 Smith, Stephen, Mountainville.
 Smith, Wilbert L., 522 W. Onondaga St., Syracuse.
 Smith, Wing R., 611 Park Ave., Syracuse.
 Smithers, Norman E. F., 53 Pickering St., Ogdensburg.
 Smylie, Frank W., 1102 S. Thirty-second St., Omaha, Neb.
 Smyth, W. A., 283 Front St., Owego.
 Snow, Charles W., 214 S. Warren St., Syracuse.
 Snyder, Charles, Heuvelton.
 Souci, George O., Boylston Center, Mass.
 Soule, F. C., 509 W. Onondaga St., Syracuse.
 Spencer, H. J., Corry, Pa.
 Spencer, Nelson S., 27 William St., New York.
 Spratt, Thomas, 90 Washington St., Ogdensburg.
 Spring, Frank D., Dayton, Fla.
 Stearns, George T., Palmyra.
 Steele, Fred W., 319 Willow St., Lockport.
 Steele, Walter E., 319 Willow St., Lockport.
 Stetson, Francis Lynde, 15 Broad St., New York.
 Stevens, Henry J., 205 Hopper St., Syracuse.
 Stevens, LeRoy W., 69 W. Washington St., Chicago, Ill.
 Stevens, Ralph J., Liverpool.
 Stevens, Ward W., Liverpool.
 Stewart, Samuel L., Newburgh.
 Stinard, Alfred F., Phoenix.
 Stone, Charles L., 815 James St., Syracuse.
 Stone, Horace G., 410 University Ave., Syracuse.
 Stratt, F. C., 95 Nassau St., New York.
 Sutton, Edwin O., 235 Elm St., Buffalo.
 Sweet, Albert L., Medina.

Sweet, John E., 114 Merriman Ave., Syracuse.

T

Tabor, Ernest G., Meridian.
 Talbott, James H., 421 Irving Ave., Syracuse.
 Talcott, George M., Skaneateles.
 Tallmadge, Samuel, 542 Warren St., Hudson.
 Taylor, Abram, Middleport.
 Taylor, Norman G., Weedsport.
 Taylor, Townsend E., 118 Hudson St., Syracuse.
 Ten Broeck, Wessel, Hudson.
 Tenney, Mrs. Ellen L., 484 Madison Ave., Albany.
 Thacher, George H., 111 Washington Ave., Albany.
 Thalheimer, Gates, 203 E. Water St., Syracuse.
 Thatcher, Jerry B., West Danby.
 Thayer, Charles I., Cooperstown.
 Thayer, Charles L., Lyndonville.
 Thomas, W. H., 118 Ruskin Ave., Syracuse.
 Thorne, Jonathan, 19 Cedar St., New York.
 Thorne, Oakleigh, Millbrook.
 Thorne, Samuel, 19 Cedar St., New York.
 Tilley, Edwin H., Memphis.
 Tillinghast, A. O., West Valley.
 Tisdale, W. D., Cortland.
 Titus, Seymour M., Weedsport.
 Toh, Dr. M., Bangkok, Siam.
 Townsley, H. M., Canton.
 Tracy, Charles, Ghent.
 Traver, Fred E., Rhinebeck.
 Treichler, Henry B., Sanborne.
 Trowbridge, Miles L., Syracuse.
 True, R. B., 1100 E. Genesee St., Syracuse.
 Tryon, Howard, R. 1, Auburn.
 Tryon, Oscar, Auburn.
 Tubbs, A. S., Maple View.
 Tucker, Gilbert M., 304 State St., Albany.
 Tuckerman, Lucius C., Milton.
 Turner, Benjamin, Horseheads.
 Tuttle, Ezra A., Eastport.

U

Umbrecht, Charles, 214 Prospect Ave., Syracuse.

V

Van Alstyne, Edward, Kinderhook.
 Van Benthuyssen, Frank, 8 Elk St., Albany.
 Van Buren, John P., Stockport.
 VanCortland, Robert B., Mt. Kisco.
 Vanderveer, George, Amsterdam.

Van Duyn, Dr. John, 318 James St.,
Syracuse.
Van Duzen, Jonas S., Horseheads.
Van Horne, Abram, Fonda.
Van Horne, John S., 142 Manhattan
Ave., New York.
Vann, Irving G., 316 James St., Syra-
cuse.
Van Ness, Frank, Baldwinsville.
Van Valkenburg, John L., 552 Madi-
son Ave., Albany.
VanWagenen, Jared, Lawyersville.
Varnum, Robert T., 43 Cedar St.,
New York.
Vilas, Calvin E., 617 Ninth Ave.,
Seattle, Wash.
Von Herff, B., 1901 McCormick Bldg.,
Chicago, Ill.
Voorhees, William J., Baldwinsville.

W

Wadsworth, Arthur H., R. 3, Syra-
cuse.
Wadsworth, James W., Geneseo.
Wadsworth, James W., jr., Geneseo.
Wadsworth, John H., Camillus.
Wadsworth, W. Austin, Geneseo.
Wagstaff, Alfred, jr., Babylon.
Wainwright, Hon. Richard T., Rye.
Walker, Wallace, Auburn.
Ward, Frank D., Batavia.
Wardwell, Henry L., Springfield
Center.
Warner, Charles M., 438 S. Salina
St., Syracuse.
Webster Wm. A., South Hammond.
Weed, William R., Saratoga Springs.
Weir, Henry C., Sugar Loaf.
Weitzer, Bernard, 320 Van Siclen
Ave., Brooklyn.
Weller, William V., 524 Waverly
Ave., Brooklyn.
Welles, George M., Big Flats Road,
Elmira.
Welles, John C., St. Johnland, Kings
Park, L. I.
Wells, Edwin M., 168 Fage Ave.,
Syracuse.
Wells, Eugene, Rhinebeck.
Wells, Harrison, 98 Port Watson St.,
Cortland.
Wemple, Robert, Utica.
Wende, Frederick, 21 Park Row,
New York.
Wende, Dr. H. S., Tonawanda.
Westfall, Oscar J., Camillus.
Westgate, Clement, Liverpool.
Whelan, Michael, 614 E. Genesee St.,
Syracuse.
Whipple, Watson H., Medina.
White, C. R., Ionia.
White, Horace K., 713 James St.,
Syracuse.

White, H. Lawrence, Utica.
White, Hugh, 2800 Whitesboro St.,
Utica.
White, W. Pierrepont, Citizens'
Trust Co. Bldg., Utica.
Whitney, C. P., Orleans.
Whitney, N. Prentice, Morley.
Wiard, W. W., 130 Holland St., Syra-
cuse.
Wilber, David F., Genoa, Italy.
Wilbur, Charles V., R. 3, Syracuse.
Wilbur, Frank L., Camillus.
Wilcox, Aurin, Corning.
Wilcox, C. C., Fulton.
Willcox, Charles A., Camillus.
Willetts, William R., Skaneateles.
Williams, Charles F., 280 East Ave.,
Lockport.
Williams, H. P., Highland Park, Mich.
Williams, J. Simpson, 306 Broadway,
New York.
Willson, J. C., Canton.
Wilson, Hon. Charles S., 101 So. Man-
ning Boulevard, Albany.
Wilson, L. H., 26 Washington St.,
Ogdensburg.
Wilson, Thaddeus L., Woolworth
Bldg., New York.
Wilson, Hon. Thomas B., Hall.
Wing, Henry H., Ithaca.
Wing, J. Morgan, 22 William St.,
New York.
Winter, Mrs. J. C., 10 Madison St.,
Syracuse.
Winters, Harry B., 61 S. Lake Ave.,
Albany.
Witherhead, George H., 10 Allen St.,
Gloversville.
Witherhead, J. B., Morristown.
Wolcott, C. E., 800 W. Genesee St.,
Syracuse.
Wood, George M., Woodville.
Wood, James, Mt. Kisco.
Woodward, J. Milton, 198 Pine St.,
Lockport.
Woodward, James O., 49 Grand St.,
Albany.
Woodward, James S., Lockport.
Woodworth, Amos L., Phoenix.
Worden, Byron, R. 5, Oswego.
Worker, Hamlett, Fay Road, Syra-
cuse.
Wormuth, George B., R. 4, Syracuse.
Wright, Maryatt M., Lamson.
Wyckoff, Edward G., Ithaca.

Y

Yates, Harry, 517 Hamburg St.,
Buffalo.
Young, Charles W., 206 Walnut
Place, Syracuse.
Young, Eugene C., Syracuse.

ANNUAL MEMBERS

A

Anderson, E. H., Room 100, N. Y. C.
R. R. Station, Rochester.

B

Babcock, H. E., Ithaca.
Barnes, Thurlow Weed, jr., Niver-
ville.
Bates, George E., Ind. Agent, D. & H.
R. R., Albany.
Bean, W. L., McGraw.
Benjamin, E. W., Ithaca.
Botsford, Elmer F., Plattsburgh.
Bomus, J. H., Coxsackie.
Burnett, P. H., Goshen.
Bush, Wm. F., Newburgh.
Bush, Seth J. T., Morton.

C

Cameron, H. J., Cornwall.
Cole, H. E., 36 State St., Albany.
Cole, Mark W., Albion.
Colket, J. E., 6 Mercer St., Albany.
Cook, S. J., R. D. 10, Dunkirk.
Cottrell, Case, Hoosick Falls.
Cottrell, Ernest, Hoosick Falls.
Cowee, Arthur, Berlin.
Cushman, John B., R. D. 2, Troy.

D

DeVine, Dr. J. F., Goshen.
Dunn, E. T., Newark.

F

Fenner, Casper, Heddens.

G

Gould, George L., Eagle Bridge.
Greeley, Mrs. Helen Hay, 17 W. 8th
St., New York City.

H

Hepworth, J. A., Milton.
Hildebrand, George, Dept. of Foods &
Markets, 202 Franklin St., New
York City.

J

Johnson, A. A., Farmingdale, L. I.
Jordan, Dr. W. H., Geneva.

K

Knickerbocker, Edwin, Bangall.

L

Lacy, F. H., Poughkeepsie.
Larmon, C. W., Salem.
Lounsbury, S. M., Owego.

Lowell, S. J., Fredonia.
Lunney, James, Washingtonville.
Lyon, H. H., Bainbridge.

M

Moak, Dr. Harris, 360 Park Place,
Brooklyn.
Morrell, L. L., Kinderhook.
Mulford, J. B., Lodi.

P

Palen, H. O., Syracuse.
Peck, T. Boynton, 49 N. Pine Ave.,
Albany.
Pincus, J. W., 174 Second Ave., New
York City.
Provost, Albert E., Wyomanock.
Provost, D. C., Wyomanock.

Q

Quackenbush, R. W., 3724 Grand
Central Terminal, New York City.

R

Rice, J. P., Geneva.
Rider, Mrs. S. S., Hillview, East
Greenbush.
Rogers, W. P., Williamson.
Rupert, Frank E., Seneca.

S

Seelye, Gilbert T., Saratoga.
Sisson, E. C., Binghamton.
Stevens, F. R., Geneva.
Stivers, John D., Middletown.
Stocking, Prof. W. A., N. Y. State
College of Agriculture, Ithaca.
Sturgis, Russell, 300 Quincy St.,
Brooklyn.

T

Taber, F. A., Poughkeepsie.

V

Van Slyke, J. B., West Coxsackie.
Van Slyke, P. V. B., West Coxsackie.
Van Vranken, A., Watervliet.

W

Ward, Walter E., Albany.
Welsh, F. S., Grand Central Ter-
minal, New York City.
Williams, B. C., Batavia.
Witter, D. P., Berkshire.
Wright, W. D., Altamont.
Wright, W. J., Alfred.

STATE OF NEW YORK
DEPARTMENT OF AGRICULTURE

CHARLES S. WILSON, Commissioner

Bulletin 93

Proceedings of the Annual Meeting

OF THE

New York State Dairymen's Association

HELD AT

Syracuse, New York

November 14, 15, 16 and 17, 1916

CONTENTS

	PAGE
Officers	707
First Session:	
Address of Welcome, Walter R. Stone.....	709
Response, W. E. Dana.....	710
Address, Charles S. Wilson.....	716
Milk, A Food for Everybody, Dr. John H. Kellogg.....	721
Second Session:	
Farm Buildings, F. G. Kraege.....	739
Butter Makers' Conference, E. S. Guthrie.....	742
Third Session:	
My Experience as a Distributor of Milk, Loton Horton.....	746
Present-Day Tendencies in Market Milk — Control and Production, Lucius P. Brown.....	756
Fourth Session:	
Marketing Dairy Products, Roy C. Potts.....	762
Cheese Makers' Conference, George E. Hogue.....	770
Fifth Session:	
Dairy Problems in New York State, Charles W. Wicks.....	773
The Work of the Dairymen's League, Frank Sherman.....	784
Sixth Session:	
Business Meeting	790
By-Laws of the New York State Dairymen's Association.....	793
Annual Members	796
Life Members	797

NEW YORK STATE DAIRYMEN'S ASSOCIATION

OFFICERS, 1917

<i>President</i>	.....GEORGE E. HOGUE.....	Arcade
<i>Vice-President</i>	.....OSCAR F. SOULE.....	Syracuse
<i>Secretary</i>	.....S. C. SHAVER.....	Albany
<i>Assistant Secretary</i>	.....T. E. TIQUIN.....	Albany
<i>Treasurer</i>	.....R. R. KIRKLAND.....	Philadelphia

DIRECTORS

E. G. DIETRICH.....	Syracuse
FRANK SHERMAN	Copake
W. J. STOCKING, JR.....	Ithaca
W. N. GILES.....	Skaneateles
HENRY L. GRANT.....	Copenhagen
LOTON P. HORTON.....	New York City

FIRST SESSION

TUESDAY, NOVEMBER 14, 8:00 P. M.

The fortieth annual convention of the New York State Dairymen's Association was called to order in the State Armory at Syracuse by its president, W. E. Dana, of Avon.

PRESIDENT DANA: First will be an address of welcome by Mayor Stone of the city of Syracuse.

ADDRESS OF WELCOME ON BEHALF OF CITY

WALTER R. STONE, MAYOR OF SYRACUSE

Mr. President, Members of the Association, and Friends: I see a goodly number of people here in this audience who I believe do not keep cows. Now that is a good sign, because whenever we can find a subject of such interest that, although we may not be deriving a profit from it, we are interested in it ourselves, it must be a good thing: So I feel that the people of Syracuse in particular are fortunate tonight in having with them this dairymen's gathering.

The more we, as city folks, realize the fact that after all there is no increment except that which comes from the soil in one form or another, the more intelligently can we shape our lives, and I believe that if the people of Syracuse would come here, go through these exhibits, listen to these instructive talks, and find out why we have to pay so much for milk, we should feel a little more satisfied in paying the amount that we have to pay.

I have heard much about butter fat, and a great deal about Guernseys, Holsteins, and Jerseys. I have to confess to you frankly and honestly, however, that I have never milked a cow, but I have drunk much milk. I was brought up on milk, and I have a wholesome respect for the cow. I believe there is no

animal that roams the field that has the value of a cow, and I am perfectly satisfied in looking over this audience and knowing as a matter of fact that the business of producing milk and the product of the dairy are in the hands today of business men, not unintelligent or ignorant men, but men who have made a scientific study of their problems. These very exhibits that you see here prove that.

Now when anything becomes a scientific business, it must be worth while, and for that reason the gathering here in Syracuse by you who are interested is worth while to this city. In extending you welcome to the city and its hospitality, I want to say to you that I am personally grateful for this opportunity of meeting you and of being present at the opening exercises of your meeting.

PRESIDENT DANA: Mr. Mayor, I want to make an apology to you for the seeming perfunctory response to your welcome by reading, but last summer, appearing on the same platform with the Commissioner of Agriculture, I spoke without notes and I thought I did it pretty well. The Commissioner got up afterwards and stated that a man did not pay proper respect to his audience who did not write out his address. Therefore, I have written out even my response to your address of welcome, because I did not want the Commissioner to come back at me again.

RESPONSE ON BEHALF OF THE STATE DAIRYMEN'S ASSOCIATION

PRESIDENT W. E. DANA

Mayor Stone, it is a sincere and great pleasure for me, as president of the New York State Dairymen's Association, to respond to your hearty words of welcome. There is an element of personal pleasure to me in being welcomed to this city owing to the fact that at one time my grandfather owned a farm within the limits of what is now the city of Syracuse. I remember my uncle's telling me of starting from Syracuse on foot with a drove of cattle in the days when transportation was much more primitive than at present — the only similarity being that then, as now, they moved over your business streets at grade. My uncle drove the cattle to Albany, trading on the way, broke the Albany cattle market, and drove the herd on to New York City; broke that

market, and drove on to Boston where the cattle were eventually disposed of after a trip certainly of several weeks. It is only by going back to such incidents as this that we can realize the enormous change and development that has taken place in the business and business methods of this country. A similar change has taken place in the production, manufacture, and distribution of dairy products. At that time the milk question was very simple. Today it has become a very complicated problem. In its development undue emphasis has been placed upon the sanitary side of the milk question, and we have lost sight of the fact that milk is not a luxury but a food. So carefully and systematically do the health officers of the various municipalities of the state look after the milk supply that it is within bounds to say that there is no food so carefully guarded as milk. In this city especially, the intelligent, painstaking supervision of the production and distribution of milk is so systematized that, if any housewife receives milk of poor quality, it is because she will not avail herself of the means of information as to its quality afforded by your health bureau. On behalf of this association, I wish to thank the Syracuse Chamber of Commerce for the many courtesies extended to us, and express to the local press appreciation for their kind treatment.

During the past year, the president, in endeavoring to carry out the work that he thought this society should do, attended the hearing on milk rates in New York City before the Interstate Commerce Commission and endeavored to set forth the fact that the rates for transporting milk from the country to the city of New York were higher than the milk rates to other cities of the state — a rate approved by the New York State Public Service Commission. This is a very important matter because the freight rate, on the present method of buying, is paid by the farmer and reduces the amount received by him.

We also have held two summer meetings — at Warsaw and at Adams. Another was planned for Richfield Springs, but was not carried out because of the unfortunate prevalence of infantile paralysis. The farm bureau agents of Wyoming, Jefferson, Herkimer, and Otsego counties are giving effective co-operation. Your president also attended the preliminary hearing of the

Wicks Investigating Committee at Utica, in which city the general scope of the investigation was discussed. He also attended hearings at Richfield Springs and Rochester. The importance of this investigation, as carried on by this committee, can hardly be overestimated as giving intelligent information to the general public regarding the inadequate return the dairymen were receiving. In these hearings, the farm bureaus and the cow testing associations rendered invaluable service to the dairymen of the state in showing the cost of milk production in the various sections of the state. It was shown before this commission that there was a strong organized effort on the part of the feed dealers to prevent the farmers from buying feed in carload lots, either individually or in organized groups. This is certainly an unfortunate situation. The testimony shows conditions in the ice-cream trade that are far from ideal. The testimony before this committee seemed to substantiate the general opinion that there exists in this state no open market for fluid milk, but that the price is fixed arbitrarily by the milk-purchasing companies, who, in general, post the price that they will pay for milk for the succeeding six months, giving the farmer a certain number of days to sign up. If he refuses to sign, the companies threaten not to buy his milk. The fact, of course, that the prices offered by the milk buyers are practically the same, may be only of academic interest as a curious psychological phenomenon, but the dairyman has his "doots" and thinks it spells "trust."

In its various branches, dairying is far and away the most important agricultural interest of the state of New York. Not only is its retention and development vital to the interest of the dwellers upon its farms, but to its urban population an abundant, pure, and adequate supply of milk is absolutely essential. That the rural life of the state shall be maintained upon a self-supporting and proper plane of living, there must be a return for the labor, energy, and capital invested in dairying commensurate with their returns in other business. If dairying is simply a "family occupation" and its existence depends upon the labor of the farmer, his wife, and children during long hours and with a return that shall only give them a bare existence, we cannot wonder at the decadence not only of the country church, but of country life also, and the inevitable trend from the farms to the city.

During the past summer, I drove six hundred miles from my home in the Genesee Valley to northern New York, then down to Otsego Lake and homeward. There was a marked contrast between the prosperity of the homes and farms in the purely dairy sections that I passed through and that apparent in the fruit, grain, and mixed farming sections. This compares consistently with the results of the farm surveys carried out by the New York State College of Agriculture at Cornell University, which show that dairying yields the lowest return of any kind of farming in the state of New York. It is certainly a sad commentary on farm life that one of the leading educators of the state makes when he says that thousands of farm boys from sixteen to twenty years of age are being deprived of an education because they are being kept home as workers. While it is true that certain dairymen, fortunately located as to soil and market and by the application of energy and business acumen, are meeting with a fair measure of success, it is equally true that the rank and file of the dairymen of the state are not prosperous. Gradually the truth has been forced home that the only way to meet organized buying is by organized selling. The long-slumbering resentment of the dairymen against their treatment by the milk companies culminated, during the year, in an organized effort on the part of the farmers throughout the country to have a voice in fixing the value that shall be placed upon fluid milk, resulting in what has been erroneously called a "milk strike" in Chicago, Pittsburg, Milwaukee, Boston, Cleveland, and New York. In all these markets, by organization and loyalty, the dairymen have won a notable victory in that they have forced the buyers of their product to give consideration to their interests in fixing its value. The dairymen shipping milk to Philadelphia have for years, through their organization, secured this consideration. Fellow dairymen of the state, do not lose sight of the fact that your own leaders and organization won you this recognition, for I will not concede that you have less red blood in your veins or that you have leaders less capable. Give due honor to those that aided you in the struggle, but remember that if you are to enjoy the full fruit of your victory that you yourselves must conduct and reap the harvest.

There are certain fundamental propositions almost axiomatic that must not be lost sight of in any discussion of the milk ques-

tion. The production of milk and dairy products is primarily a financial enterprise. An adequate return for the capital invested and the energy and labor devoted to it must be secured. Under present conditions, there are two markets in which milk can be sold. It may be manufactured into butter, cheese, and condensed milk, or sold for human consumption as fluid milk. These markets are distinct, and from their varying nature, are governed by different conditions. From the very necessities of the case, production of milk for, together with the distribution of milk to, the consumer is more expensive and exacting than is the production of milk for manufacture and its handling. Fluid milk must be safeguarded by the precautions that the latest scientific knowledge renders available to protect and preserve its healthfulness and prevent its being a carrier of disease. In the present light of our knowledge, a large proportion of the milk supply must be pasteurized before distribution to the consumer. Milk for human consumption is in no sense a luxury but a necessity in the dietary of our people; hence, it must be produced, handled, and distributed with the greatest economy in order that the people may obtain it at the lowest price consistent with a fair return to the producer and distributor. Dairymen can never hope for a price that will render profitable poor management or cows of low production. Owing to the fact that the milk flow is not constant, and cannot be made so by any method of farm management, and that the consumption of milk in the cities is also variable, there must always result a surplus at certain times. This surplus, whether arising in the production or the distribution of milk, must be regarded as a by-product of the business and must be disposed of in a way fair to producer, distributor, and consumer. It is self-evident that no two men can long carry on business with each other unless that business is mutually profitable. The production and the distribution of milk are two different and distinct games that require special experience, equipment, and technical knowledge.

I thoroughly believe that the producers, in order to secure a fair return for their product and to have a voice in the price that shall be paid for it, must be thoroughly organized and their organizations officered by men fully identified with their interests and have within their own control facilities for preparing milk

for distribution and also for manufacturing the surplus that must inevitably arise at times. There must be loyalty on the part of the producers to their officers and elimination of jealousies and scraps such as have threatened to render null and void the victories won in Chicago and New York. Is it not conceivable that undue stimulation of milk production by the increased price of milk this winter, which will lead the farmers to increase their dairies and feed them better, may result in a surplus of milk that, if forced upon the city markets, will make conditions worse than before? The prolonged agitation as to the sanitary condition of the city milk supplies and the exaggerated emphasis placed upon its liability to spread disease have had a tendency to curtail milk consumption. Fortunately this criticism of the milk supply has, in a large measure, been removed, and it would seem that it is now high time for a vigorous, aggressive campaign by advertising and otherwise, to enlarge the consumption of milk and dairy products. Dairy organizations, whether producers or distributors of milk or manufacturers of dairy products, should engage in and loyally support the advertising campaign now being carried on by the National Dairy Council. There should be concerted effort to have the dairy interests properly represented in the consideration of National and state legislation affecting them. I cannot see why the producers of sugar in our own country are more entitled to protection from unfair foreign competition than are the dairymen. We should have a voice in determining milk and cream standards. We should be in a position to protect our interests before the interstate and state commerce commissions as to freight rates. The legislation that will no doubt be recommended as a result of the investigation of the Wicks Committee before our own state legislature, will vitally affect our interests and we should be represented in the drafting and the consideration of these measures. Since it is the general consensus of opinion that the only practical way to determine the value of milk either for manufacturing or for human consumption is by its fat content, and since the percentage of fat is more and more becoming a determining factor in fixing its value, it would seem advisable that there should be some legislation placed on our statute books regulating the methods that should be employed in this test and also for determining the fitness

of the persons employed to make them. I earnestly recommend these matters to the careful consideration of our resolutions committee, so that the views of this association may be embodied in proper resolutions to be adopted by us.

In closing, I wish to thank the association for the honor conferred upon me in electing me its president, and while I feel that I have come short of accomplishing all the president of this association should accomplish, still I have done the best that I could under my own limitations of time and the financial conditions of this society.

PRESIDENT DANA: I have the pleasure of introducing to you a gentleman who to New York farmers needs no introduction — Commissioner Charles S. Wilson.

ADDRESS

CHARLES S. WILSON, COMMISSIONER OF AGRICULTURE

Mr. President, Members of the State Dairymen's Association, and Guests: The president has outwitted me on this reading of the manuscript records, and he has made it embarrassing for me too. I confess to you that I did say in Warsaw last summer, that a speaker, in courtesy to his audience, ought to refer to his manuscript, but I want you to know that at that time I had to read my speech. This time, however, I do not believe I'll have to, but in any case I have a manuscript right here.

The program states that my subject is an address. Now, I assume that is a sort of courtesy that is extended to a state official when it is uncertain what he is going to talk about, or when it is uncertain, perhaps, that he has anything at all to say. I appreciate that courtesy, but I want to state my subject to you in this way. Last week I read a short article in one of the agricultural papers which was, in brief, this:

“Two weeks since, the National Dairy Show was held at Springfield, meeting in the East for the first time in many years, and with unprecedented success. It is the belief of many that as a result of this expedition, the whole policy of the East has been

permanently strengthened, and that during the exhibition, history was made for the dairy industry. Be that as it may, it is certain that for long months to come, the influence, the inspiration, and the enthusiasm of the exhibition will be remembered and appreciated by the thousands of dairymen who were in attendance."

I attended the National Dairy Show. I came away inspired and enthusiastic, but I also carried with me a regret that has haunted me ever since; and that is that New York's dairy interests had practically no representation. Evidently the same regret was impressed upon the minds of others, for last week an article appeared in one of our prominent trade papers, calling attention to the fact that New York was not properly represented. The New England States, on the other hand, were represented by individuals, entries, and also by state exhibits; but New York had no state exhibit whatever, and the dairy products were represented by a few entries only.

The National Dairy Show was not the exception that proved the rule. I recall other exhibitions where New York has made no showing. I am thinking in particular of the American Pomological Society, which meets every two years. It is customary for several states to put up attractive exhibits of fruit, but at the last meeting that I attended, which was held in Washington, New York was not represented as a state. You will recall, of course, that New York was well represented at the Panama-Pacific Exposition, but it seems to me that this was rather the exception, and that generally too little effort has been made to exhibit New York products. Why this seeming indifference? I confess it is difficult to determine, but I believe that it lies chiefly in the fact that New York as a state has never entered into this sort of publicity as the western states have done. We have been reluctant to see in the advertisement a means of increasing the rapidity with which progress in production and marketing can be made. We have proceeded rather on the assumption that a good product sells itself and have ignored the second principle of modern business methods — namely, that you must get behind your product and push.

As a result of such procedure, we have been caught napping, and through the advertising of our western friends, New York

products have been discriminated against in New York markets. For example, in the city of Rochester alone, the very heart of the fruit belt, thousands and thousands of boxes of western apples are being sold yearly in preference to home products, which we believe to be of superior value. It seems to me that the Monroe County fruit growers ought to be alive to their home market; that they ought to be determined that Rochester should use their home product in preference to a western product, and that this opportunity of marketing thousands of barrels of apples at their very doors should not slip from them. The time is now at hand when we must study the cases of others and the elements that have entered into it. We can readily learn a lesson from the majority of manufacturers today who have started business by advertising, continued business by advertising, and made their progress by advertising. We should not forget, however, that in every such case the quality of the product was beyond question.

Let me call your attention to a definite effort of publicity familiar to all of you and of recent interest. I refer to the Jersey cattle train that came eastward from Iowa to the dairy show. The train carried over 150 pure-bred Jerseys and en route stopped at Indianapolis, Indiana; Columbus, Ohio; and Utica, New York. Through the efforts of Mr. Fred Sessions, of Utica, a demonstration was held in that city and the people of Utica and the farmers of the neighborhood were invited to attend. We seem to have failed to see the wisdom in such an investment and therefore the necessary enthusiasm might have been lacking for the raising of funds. Yet this spectacle has afforded us a vivid example of the western spirit of publicity and the wisdom and success that such a well-organized scheme can exert. To our amazement, in our own state and in this very vicinity, we responded to the novelty of the idea and there was a great demonstration on the occasion of the visit of the cattle train to Utica. I am convinced that that has awakened us conservative folks in the East and stimulated us to a greater activity along breeding and dairy lines. The investment was worth while.

We have reached a critical period in the development of New York's agriculture. I mention foreign products, and when I say foreign, I mean out-of-state products in the Rochester market.

We have only to walk along the streets of New York, of Buffalo, or of Albany, or other cities in New York State to convince us that many other products are imported into this state and sold at our very doors, when we in New York ought to be supplying that demand, at least in part.

There is another angle that must be considered, and that is the increase in the cost of living, in which the consumer is protesting against higher prices. We have in mind a recent dispute between the milk producers and the distributors. Farmers are being paid more for their product by the distributors than ever before, and the distributors are demanding more of the consumer. The consumer can do one of two things — pay the increased price or else buy substitutes of equivalent food value; and herein lies the opportunity for the New York farmer, because he can, by constructive publicity, persuade the consumer that butter, milk, and cheese have a concentrated food value superior to that of other foods. Let me illustrate: Thus far all our insistence has been upon our price. The disposal of the product we dreamily expect to take care of itself. Contrast with this the possibility of wide-awake publicity campaigns for New York State agriculture, campaigns that would be so driven home to the consumer through the medium of magazines and the public press, that he could not escape their teachings. My meaning may be clearer, perhaps, if I sketch briefly for you what I believe might be done in the case of the dairy industry to increase the consumption of dairy products in New York.

First of all, a series of food articles of recognized authority could be circulated in large daily newspapers throughout the state. Advertisements containing striking poster pictures could be shown, a book of milk recipes issued for free distribution, and moving picture films encouraged, showing the modern dairy, the scrupulous care exercised in milk production, and the results of dairy duties. The Department of Home Economics of Cornell University informs me that data for such food articles and material for poster charts are even now available for such campaigns. What will be the effect? The consumer will take these principles into his life; he will feel a satisfaction in every ounce of butter, in every glass of milk, and in every piece of cheese that he consumes. Through

such an advertising campaign, I tell you, we could make stronger men, women, and children in New York State, as well as advance the dairy industry as a whole.

The second part of such a publicity program, which would tend greatly to increase milk consumption without a doubt, might include a city to city campaign, conducted by a corps of perhaps six or eight trained workers who could make a canvass of the larger centers of the state and reach thousands of homes through the co-operation of the city chambers of commerce and other forces well organized for co-operative service. Again, the home economics college could supply our needs, finding young women admirably fitted to make such an appeal, and equipping them with a prescribed course of lectures which could be directed into such channels as each city committee might deem advisable. Never could our opportunity for constructive publicity work be more opportune. With such a movement, you will find the National Dairy Council working hand in hand with you. In fact that organization has pioneered the movement, as you perhaps realize. How well they are doing it I may suggest briefly by showing you copies of some of their publicity propaganda that have appeared in the course of the summer in various magazines and daily papers. Many of you, I imagine, are already familiar with these full page advertisements which have appeared repeatedly in the "Saturday Evening Post." In addition to hearty co-operation and support of such an undertaking on the part of the Dairy Council, we can count, I believe, on the interest and co-operation of schools and departments of home economics throughout the state, the chambers of commerce, and countless other organizations. The Department of Agriculture, I can promise you, will be in closest sympathy with such an endeavor and together with the farmers in the state will work hand in hand.

As an agricultural state, we are proud of New York's record and call ourselves the "Empire State." To substantiate the fact, we have only to name the agricultural products in which New York ranks first or second in comparison with other states. To gain this rank has required effort on the part of our forefathers. They had their problems, and history tells us that they met them successfully. Our present standing justified the same conclusion.

We, today, have our problems, and if New York holds her rank among the states as she has done in the past, we cannot allow opportunity to slip by us. Certainly New York farmers ought to have their products preferred on the markets of our own state, and not have those markets displaced by foreign trade; but further than that, I am interested to see New York products preferred everywhere in the United States and in the world. If we accomplish this, we must put these products on their merit and proclaim what for. The consumer must be informed. I am asking for an appropriation for the Department of Agriculture sufficient for New York to represent her products at important exhibits. Such representation is right, and we ask your co-operation as we ask that of other state societies. Let us begin now for the next National Dairy Show and see that every visitor goes away knowing that New York is on the map. Let us begin now to tell our consumers the value of New York's products, for New York must maintain her lead, and we who enjoy the citizenship of such a great state and the protection of her laws surely will confess to an obligation.

PRESIDENT DANA: We next have the pleasure of listening to Dr. J. H. Kellogg, chairman of the State Board of Health, Battle Creek, Michigan, on "Milk, a Food for Everybody."

MILK, A FOOD FOR EVERYBODY

**DR. JOHN H. KELLOGG, CHAIRMAN, STATE BOARD OF HEALTH,
BATTLE CREEK, MICHIGAN**

Food is to an animal what earth is to a plant. It is the soil out of which we grow. What we eat today is walking around and talking tomorrow. The most marvelous of miracles is the transmutation of common foodstuffs into men and women, the transfiguration of bread, potatoes, and beefsteak into human intelligence, grace, beauty, and noble action. We read in holy writ how the wandering Israelites were abundantly fed in the Assyrian desert with manna from the skies and we marvel at the providence which saved a million souls from death, forgetting that every harvest is a repetition of the same miracle, that each morsel of food we eat is a gift of heaven conveyed to us by a sunbeam. Food is simply sunshine captured by the chlorophyll of plants and

served up to us in tiny bundles called molecules, which, when torn apart in our bodies by the processes of digestion and assimilation, release the captured energy that warms us with heat brought from the sun and shines out in human thought and action.

WHAT IS FOOD?

What is food? What is its relation to the animal economy? These are questions of which the wisest of the ancients knew absolutely nothing. It is less than a century since Liebig and Lehmann and their pupils began to unravel the mystery of food. In recent years no subject has received more assiduous attention from scientific men, and none has been made the object of more constant or more profound research than the questions of food and food supply. The feeding of animals and men is without question the most pressing and vital of all economic problems, a fact well emphasized at the present time by the critical situation in Belgium, Poland, and Germany.

The labors of Voit and Pettenkofer, Hubner, Zuntz, Atwater, Benedict, Chittenden, Mendell, Lusk, and Hindhede have demonstrated that there is the closest relation between food supply, or food selection, and human efficiency. In fact, it has been clearly shown that the quality and quantity of the food intake is just as directly and as closely related to the question of human efficiency as is the quality and quantity of gasoline to the efficiency of an automobile. In fact, it has been established as a fundamental principle in human physiology that food is fuel. Life is a combustion process.

How Food Supplies Fuel Needs of the Body

The human body is a machine that may be likened to a locomotive. It is a self-controlling, self-supporting, self-repairing machine. As the locomotive rushes along the iron road pulling after it a thousand-ton cargo of produce or manufactured wares or human freight sufficient to start a town or stock a political convention, its enormous expenditure of energy is maintained by the burning of coal from the tender, which is replenished at every stopping place. The snorting monster at the head of the rushing procession gets hungry and has to have a lunch every few miles along the way. After a run of a hundred miles or more the engine

leaves the train and goes into a round house for repairs; an iron bolt has dropped out or a brass nut has been shaken off. Every lost or damaged part of the metal leviathan is replaced, and then it is ready for another century run.

The human body is wonderfully like the locomotive. It pulls or carries loads, it expends energy, it consumes fuel, and has to stop at meal stations to coal up; it has to go off duty periodically for repairs. The body needs just what the locomotive needs — fuel to furnish energy and material for repair of the machinery.

How Food Differs from Fuel

Food differs from fuel chiefly in the one particular that in each little packet of food done up by Mother Nature there is along with the fuel for burning, a tiny bit of material to be used for repair of the machine. In other words, food represents in its composition both the coal and the metal repair materials of the locomotive.

The starch, sugar, and fat of food are the coal, and the protein or albumen is the metal repair stuff. Here we see at once the reason why starch and sugar and fat are so abundant in our foodstuffs, while protein or albumen is in quantity a minor element.

But there are other differences between food and common fuel which are worthy of mention. The water and the salts are essential to meet the body's needs, especially the various mineral elements, lime, soda, potash, and iron. All these we must have — lime for the bones and nerves, soda and potash to neutralize the harmful acid products of combustion processes, and iron for the blood.

All these are found in normal foodstuffs but in greatly varying proportions, so that a pretty large variety of foods must be eaten to make sure that each of the different food principles required for perfect nutrition are supplied in ample quantity.

In recent years science has discovered another and most surprising property of food in which it transcends all other fuel substances as a diamond from the Transvaal outshines a lump of coal. Natural food contains vitamins. It has long been known that an exclusive rice diet sometimes causes beri-beri, a form of general neuritis; and that a diet of dry cereals and preserved food, in time, gives rise to scurvy; but the reason was a profound

mystery. In very recent years it has been learned that the real cause of beri-beri and scurvy is the lack of vitamins, which are associated with the bran of cereals and so are removed in the process of polishing rice and in the bolting of wheat and other grains.

Vitamins do not enter into the composition of the body as do other food principles, but they are somehow necessary to activate or render active the various subtle elements that are essential to good nutrition.

There are several kinds of vitamins. Some are associated with the bran of cereals, others with the juices of fruits. Some are easily destroyed by heat, while others survive a boiling temperature. The discovery of vitamins must stand as one of the most masterly achievements of modern science, even outshining in brilliancy the discovery of radium. It was only by the most persevering efforts and the application of all the refinements of modern chemical technic that the chemist, Funk, was able to capture and identify this most subtle but marvelously potent element of the food. This discovery has cleared up a long category of medical mysteries. We now know not only the cause of beri-beri and scurvy and the simple method of cure by supplying vitamin-containing foods, but within a very short time it has been shown that rickets and pellagra are likewise deficiency diseases due to lack of vitamins, and in a recent discussion before the New York Academy of Medicine it was maintained that vast multitudes of people are suffering from disorders of nutrition due to the same cause.

MILK: THE MOST REMARKABLE OF FOODS

With this brief summary of the nature of foodstuffs and their relation to body needs, let us now turn our attention to the most remarkable of all foods known to man — milk. Milk differs from every other food substance known in the fact that it is a complete food. If in the case of adults it needs to be supplemented by other foodstuffs, cow's milk is for the young infant, when properly modified, a perfect food. It contains in excellent proportions, all the elements needed by the growing child. This is not true of any other substance known.

Milk Sugar

The fuel element is represented in milk by fat and sugar of milk. The fat is of a sort easily utilized by the body. The sugar of milk is a special product exactly adapted to the needs of the body, far superior to cane sugar, and free from the unwholesome properties of the products of the sugar cane. It is found nowhere else in nature except in the milk of animals. Milk sugar is slowly digested and absorbed. This enables it to reach the lower intestine where it is converted into lactic acid and so prevents the putrefaction to which modern science has traced a great number of the maladies of both infants and adults.

It is due to the presence of lactose that milk sours while meat putrefies. Nearly ten years ago I placed in a jar of butter-milk a raw beefsteak to which no antiseptic of any sort had been added. The beefsteak is still intact, thanks to the anti-putrefactive properties of milk sugar and the acid-forming bacteria it feeds. The reason for this anti-putrefactive property of milk was discovered by Kendall of Harvard, who a few years ago demonstrated that in the presence of sugar even highly active putrefactive organisms produce harmless acids instead of noxious toxins and ferments. This is certainly a most beneficent provision of nature whereby the normal food of the young infant is kept in a wholesome state while undergoing the processes of digestion and absorption in the intestine.

In the casein of milk is found material for growth and repair, and in a form favorable for prompt and complete digestion and assimilation. There are also other proteins in milk which serve the same purpose.

Salts and Lime in Milk

Cow's milk is also rich in salts, containing four times as much of these mineral elements as does mother's milk. Milk is particularly rich in lime. A pint of milk contains 11 to 16 grains of lime, more than is found in a pint of lime water. Note the contrast in this regard between milk and beefsteak, or flesh food of any sort. Meat supplies only half a grain of lime to the pound, although containing twice as large an amount of solids as does milk. The reason for this is obvious. Milk is a substance pro-

vided by nature as an exclusive food for a growing animal, and so must furnish lime for the bones as well as protein for the muscles. Meat represents but a fraction of the original foodstuff. When corn or other food is eaten by an ox, the several elements are separated, each going to form its own tissues,—fat to fat, protein to muscle, and lime to the bones. So to get back the whole assortment of food principles fed to an animal, one must eat its entire body, the whole ox, or the whole hog, bones and all. This being impossible, kind nature has supplied us in milk with bones, muscles, brains, nerves, every bodily structure in solution, and in attractive form, a most delectable and tempting nutrient unsurpassed by the daintiest products of the culinary art, or any achievement of chemical knowledge and skill.

Vitamines in Milk

Another notable quality of milk is its richness in vitamins. In this respect also milk is unique and superior to all other foodstuffs. Of ordinary foodstuffs each provides its own sort of vitamins. These remarkable and magic-working substances are, according to Funk, the discoverer, produced only by vegetables. Each plant produces its own sort of vitamins. The vitamins of milk are not produced by the cow, but only collected by her. As she browses about the pasture she selects the various sorts of grasses, twigs, leaves, and stems that suit her needs, and with them gathers a fine assortment of cell-stimulating, life-saving vitamins, which are borne by the glistening streams that pour from her udder and impart to this wonderful foodstuff a potency as a body-building agent possessed by no other known substance.

It should be mentioned right here, however, that these remarks are true only of clean cow's milk as it flows from the original font, and do not hold for milk that has been boiled or pasteurized, or doped with alkalis, which several processes destroy the precious vitamins and deprive the milk of one of its most unique and valuable properties.

Milk a Live Food

But there is something more to be said of the food properties of this fascinatingly interesting product of maternal providence. Milk is a live food. It is not alive, of course, in just the sense in

which a growing animal or a plant is alive, but still it possesses certain properties that are peculiar to living things and serve the body in a most remarkable manner.

Digestive Ferments of Milk

Milk contains certain digestive enzymes or ferments, galactose, oxidase, and reductase, which aid the processes of digestion. It is important to note, however, that this is true only of fresh milk that has not been sterilized by boiling. These useful ferments, like the subtle vitamins, are destroyed by heat. This may be easily shown by a simple experiment known as Storch's test for heated (boiled) milk. Shake five cubic centimeters of the milk in a test tube with one drop of 2 per cent hydrogen peroxide and two drops of 2 per cent solution of paraphenaleine-diamin. If the milk has not been heated, a dark violet color appears at once, but if it has been pasteurized or boiled, no color appears.

Antitoxins of Milk

There still remains a final word to be said about the wonderful properties of fresh cow's milk. Milk is a sort of fluid tissue and like other tissues is prepared from the blood; hence it is not surprising that the profound scientific study to which this remarkable food substance has been subjected within recent years has brought to light the fact that milk possesses some of the properties of the living blood from which it is produced. While still warm with animal heat, freshly drawn milk, like the blood, possesses the power to combat and destroy germs. Milk contains various antibodies that are found in the blood, agglutinins, antitoxins, and opsonins. It must be admitted that these last-named elements of milk have been so recently discovered that their relation and value to human life and health are not yet fully understood. It cannot be doubted, however, that future researches will show their function to be important, and there is ground for believing that they may play a part of some consequence in preparing and maintaining the defenses of the body against disease.

Now that we are prepared to appreciate the superior value of milk as a foodstuff, let us consider some of the practical questions

relating to the dietetics of milk. In order that milk shall fill the important place as a nutrient, which its natural properties render possible, it is essential that certain conditions respecting its use should be complied with.

Effects of the Sterilizing or Pasteurizing of Milk

Milk should be alive, or at least uncooked. Pasteurizing, that is, heating to a temperature of 158 degrees Fahr., destroys the anti-bodies of milk. When the milk is heated to a temperature of 176 degrees Fahr., the digestive ferments that it contains are destroyed. The boiling of milk modifies in a harmful way nearly all its ingredients and considerably reduces its nutritive value. Rats fed on boiled milk grow to only half their normal size. Scurvy sooner or later appears in babies exclusively fed on pasteurized or boiled milk. The subtle alchemy by which milk is prepared in the laboratory is upset by the crude process of cooking. Boiled milk will sustain the life of rats but it will not enable them to grow to full development, and reproduction fails altogether. Science is teaching us every day that the fine adjustments and adaptations of nature cannot safely be ignored. We are gradually learning through the loss of millions of lives that have perished through our ignorance, that the foodstuffs which nature designed for our use are not the haphazard products of wild and incoherent forces, but are wrought out by a subtle and infinite wisdom which fits them to our needs so perfectly as to transcend our highest knowledge and defy the profoundest analysis.

Man has been defined as a "cooking animal" and for ages the culinary art has been highly cultivated and made the means not only of utility but of harmful luxury. Through modern scientific research, we are coming to know that notwithstanding its great service to the human race, the art of cookery has associated with it many perils, one of the greatest of which, though the most recently recognized, is the destruction of its vital elements which so modify the food as to greatly impair its nutrient value. The beasts of the forest, and to a large extent also the primitive savages, take their food directly from the hand of nature, unsophisticated and uninjured, and as a result enjoy an immunity from disease and acquire a vigor and toughness of constitution that are unknown to

the civilized man. The chef of the future will display his finest talents, not in the compounding of complex combinations of foods with non-foods and poisons, into disease-producing entrees, rag-outs, and dyspepsia-breeding deserts, but in selecting and serving in wholesome and attractive ways the pure products of nature's great food laboratories — the garden and the farm.

Milk, fresh from the bovine font, with its rich store of vitamins and enzymes, with the finest quality of protein for brain and muscle building, salts to stiffen the boney frame-work and fats to brighten the vital fires of the body, is a natural product. It is a product that not only is not improved by the art of cookery, but is actually damaged by it and rendered incapable of supplying in the highest degree these subtle elements which are, we now know, so essential to good nutrition.

Necessity for Clean Milk

The chief reason assigned for the pasteurizing or sterilizing of milk is the presence in the milk of large or small quantities of filth that should have been left in the stable or the barnyard. Combe and others have shown that the germs associated with this putrefying filth are the most prolific source of diarrheas, and other intestinal disorders, which annually carry off so many thousands of infants during the summer months. These putrefactive germs are likewise the cause of intestinal toxemia, or auto-intoxication. Entering the body through the medium of milk, they take up their abode in the colon where they grow and multiply to the extent of hundreds of billions daily, producing poisons akin to the venom of serpents, which, when absorbed into the blood, give rise to an almost infinite number of distressing symptoms, and several crippling and even fatal maladies.

Clean milk obtained from clean cows kept in clean stables, collected in clean receptacles, and distributed in clean vessels, is the choicest of all the infinite products of the laboratory of nature. Dirty milk, corrupted with gleanings from the dung heap, the chicken coop, the pig pen, and other sources of pollution, is a veritable poison cup, and is doubtless responsible for the loss of at least nine-tenths of the 300,000 infant lives that are every year sacrificed to ignorance and neglect.

Infection due to unclean milk. Milk must be free from the germs of disease. In addition to the common organisms that give rise to putrefaction and with which the milk becomes contaminated through careless dairy methods, milk may contain germs of various specific diseases, such as tuberculosis, typhoid fever, diphtheria, scarlet fever, sore throat, Malta fever — maladies originally derived from human beings suffering from the above-named disorders and with the germs of which the milk, by direct or indirect contact, becomes contaminated.

Milk may also communicate to human beings various disorders which originate in cattle, but which may be communicated to human beings by making use of the milk of sick animals, such as foot-and-mouth disease, milk sickness, gastroenteritis, anthrax, cowpox, rabies, actinomycosis and perhaps other maladies.

Infected milk a cause of tuberculosis. Modern research has shown that bovine tuberculosis is communicable to human beings. According to Rosenau, it must be conceded that not less than 5 to 7 per cent of all cases of human tuberculosis are due to infection from the use of infected milk or the flesh of tuberculous animals. In other words, more than 5,000 persons die annually from the effects of infection with tuberculosis through the milk of tuberculous cows. A careful examination of the mortality tables published by the United States Census Bureau shows that not less than 3,000 children die annually as the result of infection with bovine tuberculosis, and not less than 60,000 children are constantly suffering from bovine tuberculosis contracted chiefly through the use of diseased milk.

The New Jersey Tuberculosis Commission found 16 per cent of the dairy cattle in that state suffering from tuberculosis. In some parts of Germany 30 per cent of all the cattle were found to be infected with this disease. An investigation made of the milk supply of the District of Columbia showed that 15 to 25 per cent of all the cows furnishing milk to that community were suffering from tuberculosis.

Tubercle germs are not readily killed by dairying processes. Schroeder killed guinea pigs by infection with germs found in butter more than four months after it was made. Mohler found germs alive in butter five months after it was churned. Tubercle

germs have been found in great numbers in cheese and ice cream. Morgenroth even found tubercle germs in nine out of twenty samples of oleomargarine purchased in the open market.

Pasteurized versus fresh milk. The public has been taught to place too much faith in sterilized or boiled milk. It is true that pasteurization or boiling of milk, destroys certain specific disease-producing organisms, such as those of typhoid fever, tuberculosis, and diphtheria, but these processes at the same time destroy certain highly essential vital properties of milk, and as already pointed out fail to destroy the spores of putrefactive organisms, which probably are on the whole the cause of far greater mischief and many more deaths than the organisms that give rise to tuberculosis and typhoid fever. If left to itself, raw milk does not decay but sours: boiled milk rots. The acid-forming organisms that find their way into the milk from the air thus exercise a protective influence, preventing the toxemia which results from intestinal putrefactions. When an infant is fed upon sterilized milk, the stools, which are naturally slightly acid, quickly become foul smelling through putrefaction, and the infant is thus exposed to highly potent disease-producing influences against which it is protected when fed upon natural, clean milk. A temperature of 240 degrees for half an hour is required to destroy the spores of putrefactive germs and even such milk is likely to promote putrefactive processes in the intestine, especially in the case of young children. It is thus apparent that pasteurization and boiling of milk should be regarded only as makeshifts which mitigate to some degree the evils resulting from the use of milk contaminated with barnyard filth, but are not by any means a substitute for clean natural milk.

Greatest obstacle to the dairy business. As the public becomes better informed respecting the dangers and the causes of tuberculosis through the efforts of boards of health and anti-tuberculosis societies, the apprehension of danger from the use of milk is going to be greatly increased, and this will naturally lead to less consumption of milk and dairy products. The average citizen is daily becoming wiser in relation to foods, and he is no longer willing to close his eyes and swallow without question whatever is presented to him.

In my opinion the greatest obstacle in the way of the dairy business in this and other civilized countries is the prejudice which in recent years has been developing in the public mind against the use of milk containing barnyard filth with the germs of barnyard and pest-house diseases. The chief opponents of the dairy business are the manufacturers of baby foods. Physicians are continually warning mothers to beware of the milk supply and the manufacturers of baby foods are waxing rich from the sale of wheat flour with various slight modifications at prices a hundred times the original cost and actual value. When dairymen are able to supply the public with clean milk, free from barnyard dirt and disease-producing germs, baby foods will disappear from the columns of the country newspaper and from the shelves of the corner drug store, and the consumption of milk will increase many fold.

How to Eat Milk

Milk must be eaten, not swallowed as a beverage. It must be chewed. All foods need to be masticated. The calf and the nursing infant chew the milk which they draw from the maternal font. The movements of the jaws and the sucking movements executed by an infant in nursing induce an abundant flow of saliva which, mixing with the milk, properly dilutes it, and to a high degree promotes its digestion. When swallowed rapidly as a beverage, milk is likely to form in the stomach large and hard curds, which are very slowly digested. Many persons who suffer from taking milk in this way imagine themselves to be unable to take milk and so abandon its use. I remember a man to whom I had recommended the liberal use of milk. He protested that he was absolutely unable to use it at all and stated that on the last occasion on which he had taken milk he had nearly lost his life. A few hours after hastily swallowing several glasses of milk he experienced a sensation of suffocation, was then nauseated, and on attempting to vomit experienced a choking sensation. On reaching his finger down his throat he felt a mass which he seized and to his astonishment drew out a rope of milk nearly a yard in length. The milk had formed in his stomach one large, hard curd which he was certainly very fortunate in being able to get rid of

so easily. The famous English surgeon, Dr. Lawson Tait, told me of a case in which he was obliged to perform a surgical operation to remove a similar mass of curds that had lodged low down in the intestine.

Milk should be sipped slowly with a sucking movement of the throat or taken through a straw so as to secure a liberal admixture of saliva. By this means the formation of hard, indigestible curds may be prevented.

Milk must be taken in right quantities and in right combinations. It cannot be denied that milk digests better when taken by itself or in very simple combinations than when mixed with a large variety of other foodstuffs. In some instances, also, a large quantity of milk is more easily digested than a small quantity. When the stomach produces a large amount of highly acid gastric juice, as is usually the case with persons who have been accustomed to a hearty meat diet, the curds formed when a small amount of milk is taken will be large and tough, whereas if a larger amount of milk is taken, the curds formed will be smaller and softer. Hence, the proper remedy in many cases in which a person complains that he cannot take milk is to take more milk.

The taking of milk with meat is perhaps the worst of all dietetic combinations. The reason for this was made clear by Pawlow, the eminent St. Petersburg physiologist, who showed that meat requires a highly acid gastric juice for its digestion and that the stomach produces this sort of gastric juice when meat is eaten, while milk demands a gastric juice low in acid. It is, of course, impossible for the stomach to make at the same time gastric juice suited for the digestion of meat and gastric juice suited for the digestion of milk. The interesting discovery of Pawlow perhaps explains the ancient prejudice against the use of milk and meat together embodied in the Hebrew law, forbidding the seething of the flesh of the calf in its mother's milk.

When milk is largely used as a nutrient, the balance of the diet should consist chiefly of fruits and vegetables for the reason that milk contains an excess of lime and is deficient in potash and soda, which are necessary for perfect human nutrition. The last-named elements are abundant in fruits and vegetables, particularly in the potato, which is also very rich in salts of potash. A diet

consisting exclusively of milk and cereals is less satisfactory. Such a diet often gives rise to scurvy in infants. Cereals are deficient in the alkaline elements that are needed to neutralize the acid products developed in the body.

It is well to remember also in the use of milk, especially when it is freely taken, that one may easily by this means ingest an excess of fats. The milk of certain breeds of dairy cattle is exceedingly rich in fat. The use of such milk in some persons, and especially in infants and young children, gives rise to symptoms which are sometimes denominated as biliousness, but which are not directly connected with the liver, being due to putrefactive changes set up in the intestine by the presence of an excess of fat. Breeders of dairy cattle have labored to produce strains of milch cows that produce milk containing a large amount of fat because they are more profitable, but for table use, milk containing a smaller proportion of fat is much to be preferred. It may be on this account, as suggested by Rosenau, that the milk produced by the Holstein cow is much better adapted to the human stomach than is that of breeds that produce a milk containing a larger proportion of butter fat.

Modified Milk

When employed in artificial feeding of infants and in some cases in the feeding of invalids, cow's milk must be especially modified. Ignorance of this fact and of the proper method of feeding milk is responsible for the deaths annually of a great multitude of artificially fed infants. Of the 2,500,000 infants born in the United States annually, not less than 250,000 die as the result of improper artificial feeding. The mortality of bottle-fed infants is more than four times that of breast-fed infants. Cow's milk differs very decidedly from mother's milk. It contains four times as much lime and three times as much protein and only about two-thirds as much sugar. Protein and fat are the elements of cow's milk that are the greatest source of trouble to the human infant. Each animal produces milk exactly adapted to its own young, calculated to promote the development of its digestive organs in a normal way. The milk of the whale and the seal contains 50 per cent of solids and an enormous proportion

of fat, which the young whale needs to protect it in the icy waters in which it lives. Cow's milk contains a large amount of protein and lime to support the rapid growth of the calf, which attains puberty at the end of two years — about one-seventh of the time required for the human infant to reach the same stage of development.

Various formulas have been devised and recommended for the modification of cow's milk in artificial feeding, most of which are more or less complicated. Recent experience has shown that a very simple method is much superior to the complicated measures that have been developed. It is only necessary to add two things, water and sugar, either milk sugar or malt sugar, to render cow's milk suitable to the use of the very young infants; malt sugar is preferable because it is free from germs that are often found in milk sugar in great numbers and is much more easily assimilated.

A Person May Be Sensitized to Milk

Another point to which attention should be called in the interest of both infants and invalids is the fact that certain persons become sensitized to milk as well as to other forms of protein, and to a person who is sensitized, even the smallest amount of milk gives rise to highly poisonous and even fatal symptoms. Many infants die annually from this cause. This fact should be borne in mind in changing the infant from the breast to bottle feeding. The milk should first be given in very small quantities, a teaspoonful in a half glass of water, the proportion being gradually increased until the proper dilution is reached. The same method should be pursued with individuals who have learned by experience that unpleasant symptoms are noted after the use of milk. The adult or infant who is sensitized to milk may be cured by the administration of milk in graduated proportions, beginning with extremely small doses. Such a case requires the personal care of an experienced physician.

Medical Uses of Milk

Milk is not only useful as a nutrient for healthy persons, but by proper management, may be made to play a highly important role as a curative agent. For example, there is no better means of inducing a rapid gain in flesh than by liberal milk feeding.

A patient may easily make a gain of a half pound to a pound a day by milk feeding, and in favorable cases an even more rapid gain of flesh may be secured. Milk feeding has often failed, however, through neglect of one or more of the important principles that have been above outlined. To be successful as a fattening diet, milk must be taken in a natural state, neither sterilized nor pasteurized. It must be taken regularly and in small amounts, but in large aggregate quantity. The amount required a day is from an ounce to an ounce and a half per pound of body weight. A glassful of milk every half hour is the usual routine. Twice a day the patient should eat freely of fresh fruits and such fresh vegetables as lettuce or celery. The purpose of this is to supply the needed alkaline salts that are lacking in milk and also to furnish a liberal supply of iron, which is also lacking. The young infant can thrive upon an exclusive diet of milk for the reason that at birth an infant carries in its liver a very large store of iron, which has been provided in sufficient amount to last through the nursing period, not present in milk in adequate quantity.

The free use of fruits and fresh vegetables also helps to prevent constipation, which is likely to result with an exclusive milk diet. Constipation is less likely to occur, however, when milk is taken in large quantity than when it is used in small amount. When the patient takes five or six quarts of milk a day, he ingests a large surplus of protein, the curds formed from which pass in considerable amount through the intestine undigested and unabsorbed and thus aid bowel action.

By a milk regimen in which milk, fruits, and vegetables are combined with bran, or agar-agar, if necessary adding some paraffin preparation, to stimulate peristalsis, it is possible to rapidly change the intestinal flora. The sugar of milk, which such a regimen supplies in large amount, finds its way into the colon, sets up there fermentation processes that give rise to an abundance of lactic acid by means of which putrefactive processes are prevented, and thus the wild bacteria, largely derived from meat and unclean milk, are prevented from developing. The stools lose their foul odor and acquire the character of an infant's stool. The foul coat disappears from the tongue, and the

unpleasant odor from the breath. The skin clears, the patient gains in flesh, and a state of high health rapidly replaces one of invalidism and disease.

Employed in this way, milk becomes a most effective means of combating many forms of neurasthenia and other chronic disorders accompanied by autointoxication and emaciation.

Free Use of Milk the Remedy for Lime Starvation

Again, the free use of milk is a useful, almost necessary remedy for lime starvation, which, according to Professor Sherman of Columbia University, is coming to be almost universal in this country, and is doubtless largely responsible for the early decay of the teeth noted among American children. Medical examination has shown decay of the teeth in 95 per cent of the children in our public schools. The body requires daily to make good its mineral losses 15 to 20 grains of lime and smaller amounts of associated minerals. The sugar, white bread, rice, meat, potatoes, butter, and other articles that constitute the staple foodstuffs of the national bill of fare contain less than a third of the required amount of lime. Wheat contains one-half grain of lime to the pound, potatoes and rice about the same amount. Cane sugar, molasses, butter, and lard contain practically no lime at all. Milk, on the other hand, contains 11 to 16 grains of lime to the pint. Thus an ounce of milk contains as much lime as a pound of fine flour bread. Wheat bran is rich in lime, containing about the same percentage of lime as milk. It is evident then that the American people stand greatly in need of more milk and more bran to complete the national bill of fare. An extra pint of milk and three or four ounces of bran added to the daily bill of fare of the average American would in a few generations add two or three inches to the average height of the American people and would produce an immensely greater gain in constitutional vigor and stamina.

The number of additional dairy cattle required to produce daily the additional 50,000,000 quarts of milk, my expert hearers will be better able to estimate than I can do. I merely drop the hint that the best way to promote the dairy business in this country is first to induce the American dairyman to produce clean milk, free

from stable filth and disease from cows, and then to convince the American people that the readiest way in which they can escape becoming a toothless, boneless, and spineless nation is by the increased consumption of milk.

Milk Ranks High as an Economic Food

I will not consume your time with a lengthy discussion of the food value of milk from an economic standpoint as compared with other foods. It must suffice to note that 10 cents will buy in the form of milk more than twice as much food as in the form of beefsteak, nearly ten times as much as in the form of oysters, and three times as much as is supplied by 10 cents worth of eggs, so that milk is really by far the cheapest of our ordinary animal foods.

When we consider the amount of tissue-building material that may be produced on a given area of land, the economy of milk as a foodstuff becomes still more apparent.

By a simple calculation it may be shown that the same area of land that in pasture will produce 40 pounds of beef protein per annum will produce 375 pounds of wheat protein and 400 pounds of milk protein.

It is evident then that milk as a food product is well worthy of all the consideration given it, and that the advantages which may be easily obtained by the general application of the well-known methods of scientific dairying will place the business of milk production in the very forefront of our food resources and will so raise the value of milk in the estimation of the average man that an appreciative public will not only be willing but glad to pay for the pure, clean, disease-free products of the dairy of the future, a price which will be an adequate return for the labor and investment required for its production and leave a margin of profit sufficient to make of every owner of a good herd of dairy cattle a real American aristocrat.

PRESIDENT DANA: The meeting will stand adjourned until tomorrow morning at 9:30 A. M.

SECOND SESSION

WEDNESDAY, NOVEMBER 15, 9:30 A. M.

The meeting was called to order at 10:00 A. M., President Dana presiding. About one hundred were present.

PRESIDENT DANA: I regret to announce that the gentleman who was to have the subject of "Butter and Cheese That Will Sell" is confined to his house in New York by sickness, so we will not have the pleasure of hearing him speak. He is one of the largest cheese and butter brokers of New York — Mr. W. S. Smarzo.

I will have to reverse the order of our meeting this morning; that is, the last shall be first, and I am going to ask Professor F. G. Kraege, of Fort Atkinson, Wisconsin, to speak on "Farm Buildings."

I want to say to the professor that the thing that is discouraging in trying to carry on an organization to do the work, such as the New York State Dairymen's Association should do, is the fact that we cannot get the honest and active co-operation of the men on the farm.

FARM BUILDINGS

PROFESSOR F. G. KRAEGE, FORT ATKINSON, WISCONSIN

Within the month I have visited a 600-acre New England farm where the superintendent informed me that \$75,000 was invested in buildings for dairying and about \$2,000 was invested in a residence. One who travels from state to state is convinced that there are many farmers who have made better provision for the comfort of their stock than for the comfort of their families. This is the case in the East more than in other parts of the country because here you have many farms or estates that belong to rich men who live in the city.

In another part of the country, on the other hand, I recently visited a forty-acre farm that had a \$5,000 residence and a \$1,000 barn on it. Neither of these is a paying proposition. Both have invested too much in buildings. The one has invested too much in outbuildings; the other has invested too much in a residence. Yet instances like these may be duplicated many times in all parts of the country.

Fortunately there are many other farmers who have aimed to make the farm plant a profitable business. They have made a wise apportionment of the capital invested in the farm plant among land, buildings, live stock, implements, and machinery and because of this they are making money.

The type of farming carried on will determine the kind of farm buildings needed, but the buildings should be in keeping with the size and the goodness of the farm. Only about 15 per cent of the capital invested in the farm plant should be put into buildings. The barn, without equipment, should not cost more than \$50 for each mature animal kept in it, and as much as \$1,000 may be invested in the home for each member of the family.

Again, too little attention has been given to the location and arrangement of farm buildings. Evidently the economic value of both has not been appreciated by many farmers. Consequently much time is wasted annually in going to and from work, because the buildings are not conveniently located. Walking six hundred feet four times a day amounts to a distance of more than 290 miles in a single year. A saving of thirty minutes a day by having buildings centrally located amounts to about nineteen days of ten hours each in one year.

Buildings should be arranged for convenience in doing farm work. The barn should be at least 200 feet from the house and placed where the prevailing winds will not blow the odors toward the house. It should be constructed so as to provide for the comfort and health of the stock, and arranged so as to save time and labor and to be sanitary. It should be located on a slight elevation on well-drained ground and should extend north and south so as to permit the greatest amount of sunlight to enter. It has been proved that stock kept in such a barn will produce a larger profit for feed and care than if otherwise housed.

The home should be located in well-drained ground, at least two hundred feet from the road, with good outlook and attractive approach and setting. In order to admit sunlight to every room, it is best to have the house face southeast. The modern barn is planned so as to save steps in doing the chores. It is just as important to plan the home so as to save steps of the housekeeper, yet how few farm homes have been planned thus. Many miles are traveled daily by the housekeeper when this is not done. It is just as necessary to provide such conveniences as a carpet sweeper, washing machine, bread mixer, or kitchen cabinet for the work in the home as it is to provide a sulky plow, harvester, and manure spreader for the work on the farm.

Many young people leave the farm every year for the city, because the farm home is not provided with such conveniences as a bathroom, sewer system, furnace, and modern lighting. Many of the boys would remain on the farm if the home was modern, and if the other buildings were up-to-date in equipment and modern machinery was provided for doing the field work. This belief is founded on answers from many students in my classes during a period of fifteen years.

I am fully aware of the fact that it is much easier to plan new buildings than it is to re-arrange and model old ones. The largest problem of most farmers is that of re-arranging and re-modeling old buildings. But even this may often be done with much less trouble and expense than is imagined. The real difficulty is the unwillingness to undertake the job. Many are too prone to get along with what they have or with what they have inherited. Some farmers seem to be governed with the idea that it would be a reflection on their parents to re-arrange and re-model the farm buildings.

Modern farming must be looked upon as a business proposition and the conduct of it must not be governed by sentiment. A store-keeper does not hesitate to change his store in order to conduct his business more successfully. Men in charge of factories are constantly re-modeling and changing the plants so as to save time and labor. The same method should be followed by the farmer even though it requires the tearing out of a partition or the moving of the building. It is often possible to make use of much

material found on the farm and this lessens the expense of the changes. But even if this cannot be done we should remember that the time lost because of inconvenient arrangement of buildings, and of poor planning within, will soon pay for the necessary changes. The one who makes the changes has the benefit of same, while the other pays for them in the loss of time and labor and does not receive their benefit.

The value of a machine shed, for example, is illustrated by the general extension of the period of usefulness of the machines. A harvester that is not housed will be ready for the junk heap in about five years, but if properly housed its usefulness has been found to extend to fifteen years. The loss from not housing farm machinery is not appreciated by farmers.

Sanitary barns will give cows a chance to produce the maximum of profit for feed and labor and will conserve their health. Even thoroughbred cows, fed in a scientific manner, cannot do their best in unsanitary conditions. As a money-making proposition, good cows, good feed, and good barn conditions are essential, and good barn conditions are as important as either of the other factors.*

BUTTER MAKERS' CONFERENCE

**PROFESSOR E. S. GUTHRIE, CORNELL UNIVERSITY,
ITHACA, NEW YORK**

Ladies and Gentlemen: Last year, we, in our butter discussion, considered some of the questions relating to the manufacture of butter from the standpoint of the body and incorporation of moisture in butter. This year I wonder whether it would not be well for us to consider flavors. The discussion so far this morning has been somewhat along the line of ventilation of the barn. This is naturally important. In order to start this thing off right, I shall begin by considering some of the matters that we can take up, and then later will throw the meeting open for discussion.

FLAVORS

The characteristic flavor of butter is in the butyrin. Butter that has been made from fresh milk has a mild, sweet, and creamy

* The speaker next discussed plans of modern homes, machine sheds, and barns, making use of charts.

flavor. Often the sweet cream butter is considered to be flat and tasteless; on the other hand many consumers prefer this mild creamy taste. Perhaps many of you know that there is a tendency now to make butter with less acid in the cream, largely from the standpoint of the keeping properties.

TAINTS

I wish to use this term in relation to the flavors that have been absorbed by the butter, or possibly by the milk or cream from which it was made. Such substances as cabbages, onions, garlic, silage, weeds, gasoline, and groceries have very characteristic flavors, and butter tainted by them is not so valuable as when it is free from such tastes. Just to what extent some of these flavors get into the cream is difficult to explain. It is also well to be on the safe side and be watchful to prevent undue exposure. Not long ago, after talking over this matter of flavors with one of our graduate students, we decided to work along this line, and it might be interesting for you to know that some of us had grave doubts as to what extent some of these flavors are absorbed by the dairy products.

Now, just to set your mind thinking a little regarding what we have done so far: Mr. Blank took a pail of milk, hung it in the silo over night, made it into butter the following day, and the butter did not have the flavor of that silage. We have saved two prints, which we will have other judges examine later. We put one pail in a barrel of apples. The flavor of the cream was somewhat of those apples, but the butter was entirely free. We then went a step further and put some cheesecloth over the pail of cream, within two or three inches of it. The cream had the flavor of silage over the top, but the butter after it was made was free from that flavor, and it had the silage directly over it for about 12 or 13 hours.

Now, understand, I am just giving this to you to tell you what has been in our minds. In scientific literature you cannot find any data showing just to what extent some of these flavors have got into the cream, butter, or milk, by absorption, so when we go back to the barn conditions we expect to study the effect of strong odors of barns in the flavor of butter, and I suspect we are going

to find conditions a little different when that milk becomes warm. The cream was not warm. This is something for us to think about in the taking care of our products. It may be there are some things that have far more effect on this flavor than we think for just now.

RESULT OF BACTERIA

Old cream, poor milk, old or storage butter flavor, cowey dirty butter, stale and musty flavors, fishy, oily and metallic flavors are due to the action of microorganisms. Fresh butter cannot be made from old, strong cream and poor sour milk. The old butter flavor develops from the butter itself, regardless of the grade. The cowey flavor may come from the cows or it may be developed in the products by bacteria. The butter flavor is the result of the growth of microorganisms that grow at low temperatures in sweet cream. They do not grow in an acid solution. Thus, if the cream is sour, the butter flavor will not be produced. This flavor is not an important consideration in a creamery, for the butter flavor is not common and usually occurs on the farm where the cream is held for several days before churning. The stale and musty flavor seems to occur when the cream is old and strong, when the methods of manufacture have been loose and when the package or conditions under which the butter is kept have been dirty.

During Farmers' Week at Cornell, for the last four or five years, farmers have come to me with the complaint of this butter flavor, and when I suggested that they ripen the cream some, and not hold it in a sweet condition for a day or more, they have almost invariably said that they had not done this and their answer after trying it was that they had good results. The bacteria will grow in sweet cream at low temperatures, about 55 degrees, but they will not grow where there is little acid as a result of ripening.

There are two flavors that have their source in high acidity that are of great importance in storing butter. These are the fishy and metallic flavors. When the cream from which the butter is made is sweet, these flavors do not develop, but the keeping properties are so much better when there is no acid that it pays to obtain sweet cream for storage butter. It is interesting to know that an acid flavor gradually develops in the butter when made

from sweet cream, so that after a week or so, there is somewhat the flavor of acid in the butter which is not apparent when the butter is first made. The third flavor of which I speak is that of rancidity. To the mind of the average person, this flavor is a common one but actually it is not. The rancid flavor is very rarely found and those of us who use that term in relation to butter or dairy products of any source, are using the term in their own sense. I have found this flavor about five or six times since I have been here in New York, the past eight years.

This flavor does not develop if butter is made from sweet cream. Our best-keeping properties then develop from food as it comes from the cow. The Naval Department is storing about 800,000 or 900,000 pounds of butter yearly, which is made in this way. I bring this matter up at this time, so that we may know the situation confronting the butter maker. Cold-storage butter is one of the most important problems that we have now; in fact it is important in food products.

PRESIDENT DANA: Meeting adjourned until 2 o'clock this afternoon.

THIRD SESSION

WEDNESDAY, NOVEMBER 15, 2:00 P. M.

The meeting was called to order at 2:30 p. m. by President Dana.

PRESIDENT DANA: I want to make some announcements. The first thing I want to tell you is that all of you ought to join the New York State Dairymen's Association. It will cost you only \$1.00, which is necessary in order that the New York State Dairymen's Association can do the work. You will take more interest in the association if you invest something in it.

This afternoon we are going to have a paper by a man who has grown up in the milk business, and who has devoted a lifetime of effort and energy to the distribution of milk. As a dairyman, I have much sympathy for men in the dairy business. We will now listen to Mr. Loton Horton, of New York City.

MY EXPERIENCE AS A DISTRIBUTOR OF MILK

**LOTON HORTON, PRESIDENT OF SHEFFIELD FARMS SLAWSON
DECKER COMPANY, NEW YORK CITY**

Gentlemen of the Dairymen's League: This is a long story. I will go over the first part of it very briefly, because it probably would not interest you as to where I came from, or how I got there. When ten years of age, I was left an orphan, and was placed on a farm in Orange County, to remain there until I had attained the age of twenty-one. My father left a farm, and after its sale twenty-five hundred dollars was placed in the Orange County Treasury to my credit, from which the treasury was to pay the receipts to the farmer with whom I lived, and he in turn was to send me to school and clothe me.

The farmer I lived with owned a milk route in New York City, and the man who was driving the route for him was desirous of having a vacation. One June 30, 1869, therefore, I was directed

to go to New York City, to learn the route and to drive the same for one month. I was then sixteen years of age. The farmers in our neighborhood were receiving for the month of June of that year fifty cents for forty quarts of milk delivered to the railroad station, furnishing their own cans. I fully made up my mind to stay in New York since farming had little or no charms for me.

In the fall I made arrangements with my uncle in New York City, whose business was known as Slawson Brothers Milk Company, to go to school that winter and to work Saturdays and Sundays to clothe myself, and the money I received from the county treasurer was to pay for my board and lodging.

The following September, 1870, I took a permanent position with my uncle, driving a milk wagon. The principal business then was the shipping of milk by the farmer to the dealer in his own cans, placing same on a platform by the railroad tracks in the country or in the cars, which was delivered in the city on the Harlem Road and to Jersey on other roads, such as the Erie.

There were all kinds of milk businesses and milk dealers and there was a general arrangement made with the farmer, who would produce a certain amount of milk in certain months, and if he made a surplus he was to keep it at home and realize what he could out of it either by churning or by some other method.

Now I am going to mention one of our greatest competitors, whom I believe to be honest men who are doing everything they can in the interest of the consuming public — The Borden Company. Mr. Gail Borden was alive at the time and their business was in evaporated milk — what we call plain condensed milk. They ran many wagons throughout the city six days during the week, resting the seventh. The milk was delivered about the same as crude milk; that is, it was kept in a can and drawn from a spigot into a measure and poured into tumblers for the consuming public. This milk was used principally in tea and coffee, but some people diluted it and used it as fluid milk and it was very generally used and recommended by physicians for feeding babies, although a great number of the babies at that time were either nursed by their mothers or by wet nurses. Where this condensed milk was used for feeding babies, it was reduced to the formula that the doctor directed.

This method drifted along, I should say, until about 1885, when a milk concern conceived the idea of putting milk up in glass jars. This was a round jar with a glass stopper. This milk was sold at 10 cents a quart and was produced at Litchfield, Connecticut, by the Litchfield Farms Company. Later on other dealers delivered in the regular style bottle that is now used in the business; they finally drifted into a company, put up a few creameries, and bottled the milk in the country. This method attracted the medical profession, who recommended bottled milk very generally as it was considered more sanitary. Then the sales of evaporated milk commenced to wane and consequently the Bordens, having many, many wagons in the street, took up the delivery of crude milk, placing a few bottles on their wagons to start with. They built creameries and put them in good sanitary condition. They clarified their milk and they iced it abundantly, which naturally preserved the milk and kept it very much longer than milk would keep that was handled in a less sanitary way. Many people had the suspicion that they used a preservative, which was not so. Sanitation and ice brought about the good-keeping qualities of the milk. Their business increased by leaps and bounds, and it was only a question of getting the milk supply and wagons to deliver it for a number of years, as they were fast taking the trade of our great city.

I was discouraged with the methods that the Slawson Brothers were using, and in 1899, as I could see no attraction in remaining in the business, I decided to sell out my interest, but could not obtain the money I considered it worth. Consequently, I bought out a number of my partners, so as to give me the controlling interest.

In 1902, Slawson Brothers, The Sheffield Farms of Harlem and the Sheffield Farms below 110th St., and T. W. Decker & Sons consolidated, which was the cornerstone of the Sheffield Farms Slawson Decker Co., and by cutting out many of the overhead expenses, where competition had been disastrous and nobody but the landlords were benefited, we worked out certain economies so that we could handle our business as economically as our competitor.

Our company was the first to attempt to pasteurize milk in the

city. The Sheffield Farms supply of milk contained 5 per cent butter fat, or nearly that, and the milk from other locations, which had been received by the rest of our company, contained as low as 3.5 butter fat. We found, therefore, that by blending the two and pasteurizing it in the city we could obtain a higher standard of butter fat and a more uniform product than our competitors, and the watchful eye of the public is mostly on the cream line on the bottle.

Mr. Halsey, the founder of Sheffield Farms, imported the first pasteurizing apparatus that was ever in this country. We, of course, were commercially pasteurizing the milk at that time, not knowing the value of pasteurization, only that it reduced the lactic acid bacteria in milk and that, consequently, the milk would keep longer; that we could bottle it in the city and get the cream line on the bottle within an hour after it was bottled.

I had a talk with Mr. Nathan Strauss, who was a prime mover in establishing the Infant Feeding Stations and in pasteurization in our city, but he was not interested in commercial pasteurization and said we ought to devise some method whereby we could make the milk perfectly safe from pathogenic germs.

After traveling in other countries I found the most effective work was done in Berlin. They had been pasteurizing there for a number of years; tuberculosis in the city was less prevalent than in the rural districts, and the change was attributed to the pasteurization of milk to a very marked degree. We had many difficulties, however, in finding a method whereby we could perfectly pasteurize milk and still have a commercial milk, as in Germany they do not sell the milk in bottles, and consequently, the public do not look for a cream line. If milk is heated above a certain degree, the cream line will not appear, and the science was to find at what temperature all pathogenic germs could be destroyed and still leave it a commercial milk. I will leave with you our records of research work done in a commercial way by three of the most eminent bacteriologists in this country, which prove that the scientific pasteurization of milk will eliminate every pathogenic germ, if any should be lurking in the milk.

A certain man has made the statement that he saw twelve retail delivery wagons in one block in New York City. This might be

so, but there are only really on Manhattan Island five companies that are known as retail dealers, who deliver milk in bottles, and if he saw that number of wagons grouped together there were duplications from the different firms, and if he had taken the trouble to look around he would have seen a restaurant or bakery where the boys were undoubtedly getting their breakfasts, charging their books, and perhaps discussing the topics of the day.

I wish to state to you gentlemen that only about 31½ per cent of all the milk consumed in Greater New York is delivered in glass bottles. The balance is distributed in ten gallon cans, some of which is sold to stores and the milk dipped out of the can, which sells at from 6 to 8 cents a quart and people who have to count their pennies can go and get a pure, clean, safe quart of milk. In the summertime, we, ourselves, sell milk for as low as 6 cents and part of the year for 7 cents; in fact, we never charged above 7 cents for loose milk until this winter. The wholesale dealers, I am informed, endeavor to make a profit of 15 cents a can, to pay a dividend on capital invested, and many of the statements that you hear, about the farmer getting 2½ cents and the milk dealer getting from 9 to 20 cents for all his milk, are untrue. The price of 9 cents up to October 1 was for milk sold in bottles. Higher grades sold in bottles are changed accordingly.

I do not wish to offer an apology — whether our company is making money or losing money — but I wish to bring before your notice the fact that where there are such profits in business you generally see capital going in very freely to participate in the same, and I do not know of one company that has started in the bottle business in Greater New York for a number of years. Neither is there any talk of buying out and forming a large trust, as it has all been gone over very carefully and from the financial end it is not very attractive, as in the bottle milk business the greatest factor is the service given to the consumer. We have to make about 300,000 deliveries between the hours of 3 and 8 A. M.— fifteen minutes delay causes dissatisfaction. We could easily see that our competitors, covering a smaller territory, and by condensing the business, could get out larger loads of milk. For a number of years, therefore, we were reluctant to extend our territory outside of Manhattan Island, the greater portion of which

is very thickly inhabited, since, if we could get a good portion of this trade, our overhead expenses would be no more than those of our competitors, and we have done everything that is honorable to prove to the people that we have the best and safest milk that is possible to purvey.

I am going to illustrate to you, by the use of a chart, which covers from 42nd St. to 176th St., that the average distance a wagon covers after once getting to its route is only 81/100ths of a mile. No wagon has to go over two and a half miles before reaching the route, as it is very often thought by the ordinary layman that there is much time lost by the driver on the wagon in covering his territory and that the cost could be very materially lessened if our distributing stations were closer together.

In those divisions I have shown, and the section that I have just pointed out to you, there are tenements five stories in height. Only about half the people living in these tenements will buy milk from a wagon — the balance go to a store where they can get the milk for 8 cents or less. There is hardly a living man, unless he be a rare exception, who can serve one of these routes over three years and average 300 quarts per day, as he has to climb at least 300 flights of stairs every morning and on Mondays and Tuesdays, when he is obliged to make his collections, he has to duplicate the effort. This is strenuous, and we find our men either have trouble with varicose veins, falling insteps, or heart trouble, and as you are well aware we are now placed under what is known as the Employers' Liability Act. Under this act, if a man becomes disabled we have to pay him a certain percentage of his salary as long as he lives, and, if he dies and leaves a widow, we are obliged to pay her 66 per cent of his salary as long as she remains his widow, or until she remarries, and all children under eighteen years of age receive a certain percentage also.

In other sections, where our richer families live, who formerly resided in large private houses, where we could leave the milk at the door, conditions have very materially changed. They now live in apartment houses from twelve to seventeen stories high. We have to devise various methods in order to get the milk to these people at the proper time and give them the service they demand, and by working out all these problems and making such

economies as are possible, and still keeping our standard up, we are very often called a trust and a monopoly.

I am also going to read to you contracts that were made the year before our consolidation by T. W. Decker & Sons, giving the prices paid at a certain creamery by them:

I hereby agree to sell to T. W. Decker & Sons of New York, my dairy of milk for one year, commencing October 1, 1901, and ending September 30, 1902, the same to consist of three (3) cans a day from October 1 until June 30 and during the months of July and August two-thirds of that quantity. The milk to be of the first quality, from Jersey and high grade cows, to be delivered at our creamery at Grand Gorge, N. Y., as directed, and for which I agree to accept the following prices:

For month of

October.	3	cents a quart
November.	3	cents a quart
December.	3	cents a quart
January.	2 $\frac{3}{4}$	cents a quart
February.	2 $\frac{3}{4}$	cents a quart
March.	2 $\frac{3}{4}$	cents a quart

For month of

April.	2 $\frac{1}{2}$	cents a quart
May.	2 $\frac{1}{4}$	cents a quart
June.	2	cents a quart
July.	2	cents a quart
August.	2	cents a quart
September.	2 $\frac{1}{2}$	cents a quart

Dr. E. S. Persons.

I hereby agree to sell to T. W. Decker & Sons, of New York City, my dairy of milk for one year, commencing Sept. 1, 1900, and ending Sept. 30, 1901, the same to consist of about 9 cans a day from Oct. 1 until June 30, and during the months of July and August two-thirds of that quantity. The milk to be of the first quality, from Jersey and high grade Jersey cows, to be delivered at our Creamery at Grand Gorge, N. Y., as directed, and for which I agree to accept the following prices:

For month of

October.	3	cents a quart
November.	3	cents a quart
December.	3	cents a quart
January.	2 $\frac{3}{4}$	cents a quart
February.	2 $\frac{3}{4}$	cents a quart
March.	2 $\frac{3}{4}$	cents a quart

For month of

April.	2 $\frac{1}{2}$	cents a quart
May.	2 $\frac{1}{4}$	cents a quart
June.	2	cents a quart
July.	2	cents a quart
August.	2	cents a quart
September.	2 $\frac{1}{2}$	cents a quart

Mrs. Elizabeth Dent.

I hereby agree to sell to T. W. Decker & Sons, of New York City, my dairy of milk for one year, commencing Oct. 1st, 1898, and ending Sept. 30, 1899; the same to consist of about 6 cans a day from October 1 until June 30, and during the months of July and August one-third of that quantity. The milk to be of the first quality from Jersey and high grade Jersey cows, to be delivered at our Creamery at Grand Gorge, N. Y., as directed, and for which I agree to accept the following prices:

For month of

October.	3	cents a quart
November.	3	cents a quart
December.	3	cents a quart
January.	2 $\frac{3}{4}$	cents a quart
February.	2 $\frac{3}{4}$	cents a quart
March.	2 $\frac{3}{4}$	cents a quart

For month of

April.	2 $\frac{1}{2}$	cents a quart
May.	2 $\frac{1}{4}$	cents a quart
June.	1 $\frac{3}{4}$	cents a quart
July.	2	cents a quart
August.	2	cents a quart
September.	2 $\frac{1}{2}$	cents a quart

J. U. Laudon.

In connection with this I will also read you the figures of what we paid commencing October 1, 1915, and ending September 30, 1916, at the same creamery:

	Number of pounds	Amount	Average per hundred	Average per cent
October, 1915.	637,809	13,549.30	2.124	.04-51/100
November, 1915.	573,543	12,518.16	2.182	.04-63/100
December, 1915.	622,914	13,389.86	2.149	.04-56/100
January, 1916.	710,362	14,487.41	2.039	.04-33/100
February, 1916.	716,754	13,587.53	1.895	.04-02/100
March, 1916.	825,204	15,308.36	1.854	.03-93/100
April, 1916.	693,464	11,850.80	1.708	.03-62/100
May, 1916.	802,585	11,350.00	1.414	.03
June, 1916.	812,000	11,654.36	1.435	.03-04/100
July, 1916.	641,539	10,751.38	1.675	.03-55/100
August, 1916.	502,656	9,263.98	1.843	.03-91/100
September, 1916.	486,333	9,308.76	1.914	.04-06/100
General average per quart				.03-93/100

This shows that we paid the producer an increase of 1-39/100 cents in the fifteen years, whereas up to October 1, the public only paid us an advance of one cent.

In addition to this, I will relate to you what we paid in the year 1915 for operating expenses and practically everything I have mentioned in these figures has been added to the milk business since the method of bottling milk has been adopted, with the exception of possibly some stationery and part of the cans. Our cans are principally used by the farmers to convey the milk from our country plants to our city plants.

Fuel.	\$127,510.83
Repairs.	65,595.69
Ice harvest.	48,000.00
Creamery suits.	9,251.99
Machinery, maintenance and repairs.	71,347.67
Maintenance of dairy equipment.	45,884.20
Machine oil.	6,503.78
Bottle and can brushes.	3,919.09
Shipping cases.	31,225.63
Ice purchased.	20,416.31
Bottle caps and seals.	50,804.40
Certification.	7,109.97
Cleansing compound.	14,345.33
Milk cans.	49,778.31
Milk, pint, cream bottles and Milk Bottlers Federation.	288,917.17
Engine room wages and expenses.	58,347.57
Laboratory expenses.	11,330.05
Refrigerating chemicals.	4,402.87
Drivers' uniforms.	3,254.75
Tinshop.	12,044.02
Taxes.	61,171.68
Insurance.	45,587.44
Water tax.	22,871.02
Maintenance of city buildings.	34,216.08
Watchman, elevator men and cleaners.	14,919.30
Telephone and telegraph.	9,598.10
Postage.	9,384.04
Traveling expenses.	12,781.24
Legal expenses.	12,029.54
Printing and stationery.	11,321.31
<hr/>	
\$1,163,869.38	

These operating expenses do not include the increase in salaries, which is 100 per cent or equivalent to \$4,000.00 in one week for the same number of men.

This has been met by a systematic method of organization, reorganization, and the adopting of the newest and most economic methods. I challenge any business in the United States to do what the milk dealers have done in New York City in working out the problem of efficiency, and to achieve this without advancing the price to the consuming public as much as they advanced the price for the raw product. It is a business that is so technical, in which there is so much science required, and one which is of such great importance to the consuming public, that I consider the public has been most generously and honestly served, and I say, after due consideration, that I do not believe there is a city with 500,000 inhabitants that is receiving a richer and safer milk with more sanitary service than New York City. We are very much interested in our work and are very proud of the success that we have made and there is nothing that could be thought of and devised, to safeguard the welfare of the consuming public, in which we are not willing to cooperate and do our best.

The producers and the purveyors have a great opportunity in the milk industry to supply New York City. Normally 28,000 people emigrate, move, or are born in the great metropolis of Greater New York every thirty days, and no one can really appreciate how fast the consumption of milk must grow. It is to the interest of the farmers, however, and it is our duty, to see that the public gets the best and the safest milk that can possibly be sold and I guess we would all regret having a sign put up "No milk received for Greater New York."

I wish to say a few words in behalf of the New York City Board of Health. This board is a paid institution to protect the lives of the consuming public in our great city, and they are only doing their duty and doing what they think is wise. They may have men who make blunders, but show me the man who never made a blunder and I will show you a man who never did any business.

If I might be permitted to make a criticism in regard to the farmers, I would say, that I feel if the farmers, as a whole, had put forth the same effort and used the gray matter in their farm-

ing that our company has used in the purveying of milk, that more of them would have met with financial success. I sincerely believe that the sooner the farmer realizes and appreciates that the milk dealer must receive compensation on the capital he has invested and the work he performs, and the sooner the milk dealer appreciates and understands that the farmer must be on the road to prosperity and must get a reasonable compensation for a farm that is well conducted, and we both understand that what is good for one is good for the other, the sooner we shall have more sunshine and get more pleasure out of our life's work.

PRESIDENT DANA: Personally, I want to thank Mr. Horton for coming here and telling the dairymen of some of the troubles that he has experienced, for, gentlemen, it is push such as this that has developed and maintained, in the face of adverse criticism, the consumption of milk in our cities. If they had not made the criticisms on their part of the milk business, people would have been so impressed with some of the bad things that have been said about it that there would not be as much milk sold in New York and in other cities as there is.

I want to make an announcement of two committees at this time.

Committee on Resolutions:

F. E. Robertson, Watertown.

Oscar F. Soule, Syracuse.

Isaac Hunt, Adams.

Professor H. E. Ross, Ithaca.

Loton Horton, New York City.

John Bodurtha, Utica.

Wing R. Smith, Syracuse.

C. F. Hunt, Oran.

George E. Hogue, Arcade.

In making up this committee, I have endeavored my best to have it composed of men representing the interests of the dairymen in the state; and the chairman of that committee is a man who has done service for the New York State Dairymen's Association and for the dairymen of one of the largest dairy counties of the state — Mr. F. E. Robertson, Farm Bureau Manager, Jefferson County.

Nominating Committee:

H. B. Winters, Albany.

R. S. Bennett, Cortland.

F. J. Baumert, New York City.

John S. Smith,

W. N. Giles, Skaneateles.

The next address on the program is by Lucius P. Brown, Director of the Bureau of Foods and Drugs, Department of Health, New York City.

PRESENT-DAY TENDENCIES IN MARKET MILK — CONTROL AND PRODUCTION

LUCIUS P. BROWN, DEPARTMENT OF HEALTH,
NEW YORK CITY

Mr. Chairman, Ladies, and Gentlemen: The title that I have selected for my address is "Some Present-Day Tendencies in Market Milk — Control and Production." The title of my address seems in some danger of being as long as its body, but this is forced by the fact that the interests of the two elements chiefly concerned in a milk supply — the producer and the consumer — are inextricably interwoven. Whether or not milk deserves the title so often bestowed on it by enthusiastic promoters of dairying, that of "the perfect food," is not very material to our discussion. It is true that many large communities and even whole races manage to get along without it, but in the scheme of living in America and Europe, milk would appear to be as necessary to the average city as its water supply. For babies, it is used as a somewhat imperfect substitute for mother's milk, but for this use, its place may be, and in fact often is, taken by one of the host of prepared infants' foods. For adults it simply forms one of the most acceptable items in a varied dietary. But it is conceivable that if some catastrophe, natural or artificial, should cut off our source of milk supply, we should undergo some inconvenience in adjusting ourselves to the change and there would even be a certain amount of suffering, but both of these would be reduced in proportion as we had due warning of what was to come,

and had been unable to make adequate preparation for our readjustments. On the other hand, if the people of the cities should suddenly determine to stop drinking milk—let us say, from a belief that it was a dangerous food—the producer could return to the making of butter and cheese, those avenues of profit which are after all used by the great majority of the dairymen of America.

With such possibilities of mutual independence it is evident that if our cities are to continue to receive this very desirable food, at a cost that will allow of its use as compared with other foods, and if our dairymen are to continue to supply a demand of this sort, their interests are so closely in common that they should act as friends and allies, and there should be such a give and take of interests as would meet our American principle of the greatest good to the greatest number. This fact is becoming increasingly apparent to all thoughtful men in the milk industry. I shall try to indicate to you some of the lines which endeavor to this end has taken.

At the risk of being tiresome, let me remind you that the first requirement of any food supply is that it shall not convey the seeds of disease to those who consume it, and the second, that it shall furnish to such consumers the requisite amount of nourishment and shall conform to the recognized canons of honesty in really being what it purports. This is particularly true of milk, which, if it is a perfect food for man, also comes very near to being a perfect food for those living beings that we commonly call bacteria, and is therefore particularly likely to carry to man those bacteria which produce in him disease. This fact was early recognized by sanitarians, and coupled with it was a recognition of the fact that such bacteria usually accompany what we call dirt. But long before the development of bacteriologic knowledge race experience had told us that dirt was undesirable, that it somehow either produced or fostered the spread of disease, and that if dirt surrounded the production of milk, it was rather more than likely to find its way into the milk. The endeavor of these early sanitarians was, therefore, to remove from the production of this extremely susceptible product these dirt-producing surroundings and so arose the host of regulations prevailing in states and cities

designed to secure clean barns, clean dairies, clean creameries, clean milk stores, and the like, with its machinery of score cards, inspectors, and inspection reports. These were all very well as far as they went. A man is much more likely to be personally clean in clean surroundings than in dirty ones, if for no reason than that it is much easier to be clean there. But when, through growth in our knowledge of biological science, we had attained a clear understanding of the life history, methods of ingress, and action of organisms, carrying disease or producing fermentation in milk, we found not only that it was possible to produce a perfectly rotten milk in the most beautiful surroundings, but that there was no necessary relation between an expensive barn and the quality of milk produced therein, and that all our elaborate provisions as to air space per cow, distance of manure pile from the barn, and the like, were often rather worse than useless in that they fostered in the minds of producers, officials, and consumers, a false sense of security. Moreover, since our highly developed American individualism has given great latitude to officials of all sorts, each health officer appears to have been a law unto himself, to the consequent confusion of producers. How far this may go, I have lately had occasion to examine. I have analyzed the regulations of some seventeen of the largest cities of the United States, and while it is possibly needless to suggest to practical men like yourselves that in the whole code or regulations, no two of these is alike, the actual amount of diversity is astonishing. Thus out of seven of the seventeen cities mentioned, which reported on amount of air space required for a cow (it is to be presumed that the other ten have no requirements), only three are in agreement, the requirements ranging from 500 to 1000 cubic feet per cow. Imagination is appalled in contemplation of what might happen to a cow transported from the breeziness of a Chicago barn where she is allowed 1000 cubic feet to the stifling atmosphere of one in Cleveland where she need have only 500. Let us hope that the virility for which Chicagoans are famed extends likewise to their cattle. In the matter of requirements for floors of cow stables common sense takes a hand, and we find that of nine cities reporting, six require a "tight" floor, but that there is a diversity of opinion as to what "tightness" consists in — which reminds us that courts

likewise often disagree in their conception of what constitutes "tightness" in the human subject, whether it be of the pocket-book variety or that produced by alcoholic indulgence.

Most cities have requirements for removal of manure from the barn: Kansas City allows it to remain within 50 feet, New York requires it to be moved 200 feet away, while Cleveland suggests that it may remain in the field, but is admirably indefinite as to whether such field shall be the same in which the barn sits or shall be at the other end of the farm. As to requirements for the milk-house and milk-cooling and for cleaning of cows, only nine and seven cities respectively have reported. Presumably the other eight and ten allow the use of the "spring branch" for the cooling of milk and rather prefer not to give the milkers too much trouble about the cows' coats.

Such diversity of physical requirements as I have here cited not only is most unscientific and uneconomic, but throws on any such requirements grave suspicion as to usefulness; and, because this suspicion has been confirmed by actual test, using the bacterial counts of the milk as guides, there is a consensus of opinion among sanitarians that the so-called "score card" must be greatly simplified — must be so made as to throw some light on the actual condition of the milk as it leaves the barn, if that is possible, and certainly must be cut down to include only the absolute essentials for the production of clean milk — healthy cows, clean cows, clean cans, and cooling.

It follows from this destruction of ancient and more or less honorable landmarks that others must be set up if we are to have guides for our feet. One at least is of paramount importance; namely, the bacterial count of the milk as it is produced and as it is consumed — the first in order that we may not obtain after pasteurization a sort of bacterial milk-soup with a thickening of other ingredients through the pasteurizing of dirty milk, and the second in order that the consumer may have a clean milk, whether it be raw or pasteurized. But while a bacterial count should give us some index of the cleanliness of the milk, it cannot alone tell us what we want to know about its unwholesomeness, because it tells us nothing as to the character of the bacteria. So it is essential to know that no person afflicted with or the carrier of a

contagious or infectious disease shall handle the milk after it is prepared for the consumer, which means that the workers handling the supply must be able to furnish periodically and at not too long intervals, medical certificates of freedom from contagious disease. In the case of a raw milk supply, such persons would be all workers around the dairy, particularly the milkers, and including the drivers. In the case of a pasteurized supply, while it is desirable to have such certificates from these persons, at present it is only regarded as necessary to have them from those who handle the milk after pasteurization.

Such emphasis on the quality of the product when delivered, as I have suggested, does not, moreover, relieve us of the necessity of assuring ourselves of the health of the cows and of the sanitary purity of the water used for washing purposes, and imposes on us increased watchfulness of the effectiveness of cleansing of the vessels used. This suggested freedom from oversight of non-essentials should give us freedom to watch our cows more closely to the benefit of both producer and consumer. And let us hope that it will likewise enable us to watch more closely the method of drawing and handling the milk, rather than to fritter away time on an examination of equipment alone, while deriving our knowledge of the methods used from the "Yes, sir!" of the dairyman.

I have already noted the diversity in requirements for barns. Unfortunately a like diversity exists in requirements for bacterial content and pasteurization, both as to time and temperature. This is the more reprehensible in that these are supposed to be matters more or less capable of scientific demonstration. It is logical that those places which require the lowest temperatures and shortest times of holding should be (as we actually find them) those that allow the highest count. I believe that there is an increasing tendency to make such requirements uniform over the country. Inasmuch as the standards for these are of such a nature that we can secure authoritative testimony as to their value, and are not dependent on the greater or less degrees of knowledge and the prevalence of idiosyncrasies among health officers and milk inspectors, progress in such a movement should be rapid. Apropos of this question of knowledge among inspectors, I may remark that with the growth among our people of appreciation of the

importance of public health work, there is an increasing tendency to appoint milk inspectors only on the ground of fitness, as shown by civil service examinations, rather than to let politics determine such appointments as has been too much the case heretofore.

There is a general and rapidly spreading realization that pasteurization not only most surely furnishes a safe milk supply, but that even for small cities properly conducted pasteurization, whether this be performed in the home or the milk-plant, is about the only way that conveyance of disease by milk can be surely guarded against. I feel sure that it is unnecessary for me to suggest to an audience of dairymen that, if, as some medical authorities seem disposed to believe, the rather considerable prevalence of minor and major throat troubles in the United States is due to infection of the milk by cows with udders more or less diseased, pasteurization must prevail for all milk, for the elimination of all udder disease is, of course, impractical.

PRESIDENT DANA: This meeting is adjourned until 9:30 o'clock in the morning.

FOURTH SESSION

THURSDAY, NOVEMBER 16, 9:30 A. M.

The meeting was called to order at 10:00 A. M., by President Dana.

PRESIDENT DANA: The first speaker on the program for this morning is Roy C. Potts, specialist in marketing dairy products, Office of Markets and Rural Organization, of Washington, D. C.

MARKETING DAIRY PRODUCTS

ROY C. POTTS, WASHINGTON, D. C.

Mr. Chairman, Ladies and Gentlemen: You will notice on your program that the subject for this morning is "Marketing Dairy Products." This subject is so big and so broad that I hardly know what phase I ought to discuss, because it would be impossible in the short time that we have this morning to discuss all phases of it. Probably there is no one phase of farm marketing which, during the past year, has created more interest, aroused more enthusiasm on the part of the farmer, has been the means of bringing farmers' attention to the importance of greater consideration of marketing than that of marketing dairy products, particularly market milk for city distribution. Here in New York State, because of the importance of your dairy industry, you have been especially interested in this problem.

To your problem I have given some thought and it will be my purpose to discuss some of the economic phases of the producers' problem in marketing milk.

PRESENT STATUS OF MILK MARKETING

In New York State, and it is practically true for all sections of the United States, the situation that has confronted the market-milk producer has been this: In the city there has existed a

limited demand and in the country an unlimited production of milk. Milk distributors have been free to bargain for their milk supplies within this area of unlimited production, wherever the conditions met with the legal requirements of the board of health regulations of the cities in which the milk was distributed. The board of health regulation often has been the chief factor that limited the milk distributor from obtaining all or a part of his supply in any given community within the area of unlimited production. With improved transportation facilities for shipping milk, the establishment of country facilities in the form of receiving, cooling, and shipping stations, and the education of the farmer in properly caring for his milk on the farm, the distance that milk could safely be shipped into cities for market-milk consumption has been increased from a few miles to several hundred. The area from which New York City obtained its milk supply has been extended within a few years from a zone radius of less than 100 miles to one of over 350 miles. This condition has enabled milk distributors to buy milk for city distribution practically at its value for manufacturing purposes; for this entire country was previously either a butter- or cheese-producing section and some sections were both, cheese being made in summer and butter in winter.

To change the use of the milk produced in a community from butter or cheese production to that of market milk for city distribution, it was often necessary for the milk distributor to obtain control of the country facility, that is, the country creamery or cheese factory and convert it into a milk-shipping station. By so doing, he virtually obtained a local buying monopoly, for but few localities have produced enough milk to warrant the operation of a competing station. So long as the prices paid have been profitable, the farmers have continued to produce milk and many have continued even when the prices received have not been equal to the cost of production, as determined by an approved cost-accounting method.

This condition is the natural result of the merchandising practices followed, which consisted in buying milk as cheaply as possible in the communities where it could be obtained. This condition has been greatly in favor of the buyers, for when

analyzed from the standpoint of competition among the producers to sell and buyers to buy, we find the various producing communities are in active competition in offering their milk to supply the market, while the buyers often operating in different communities and in virtual control of the country facilities have caused but little competition in the buying of the milk supply. This condition often exists in the primary marketing of farm products, and by primary marketing is meant the sale of products by the producer in his local market. In the wholesale or distributing markets competition of a keener sort usually exists, as contrasted with the competition among buyers in the producers' or primary market. So long as we are to continue under the competitive system, that is, a system by which producers are to compete in supplying a demand and buyers are to compete in getting the supply, we may expect prices generally to be fixed by supply and demand. To establish the milk industry upon such a basis, it would seem desirable that conditions be such that the freest and greatest competition may exist not only among producers in selling, but among buyers in buying. If such a condition is to be obtained, we naturally ask ourselves this question, how can this be brought about?

COMPETITION VERSUS MONOPOLY CONDITIONS IN MARKETING MILK

An analysis of the question of market milk prices will show that the problem is very complex, for there are so many competing forces in the market milk business. Before taking up an economic consideration of this problem, it must be agreed that monopolistic organization on the part of any branch of the industry may tend to reduce competition and to that extent limit the normal adjustment of prices in accordance with the natural law of supply and demand. When active competition ceases, it has generally been conceded that a potential monopoly exists and, for the proper safeguarding of the interests of the public, legislation may be necessary for its regulation. If monopolistic conditions are to exist in the milk industry, then the solution of the milk marketing problem depends not upon an adjustment of conditions so as to produce the most ideal competitive conditions, but upon legislation for the

regulation of monopolies. The question of whether the regulation of monopolies is either more or less desirable than competitive conditions is not within my province to discuss. At present, and for some time to come, it will be impossible at least for a complete monopoly of the supply to be established, and, therefore, competition will continue among the producers. The extent to which producers are able to organize and pool their product will, of course, be a factor in limiting competition. Organization, however, has its advantages, such as the establishment of more sanitary, adequate, and economical facilities for the handling of milk or manufacture of dairy products and for those reasons it should be encouraged.

MARKET DEMANDS FOR MILK

In the marketing of milk under competitive conditions, there are various demands for it. Each of these demands bids, as we may say, for a part of the milk supply. As the result, part of the milk supply is used for market milk purposes, a part for cheese-making, a part for butter-making, a part for condensing, and such products as milk powder, milk sugar, and casein are also produced. There is a rather limited local demand for market milk, and for the other products there is a world demand. Due to the fact that there exists an unlimited supply of milk wherever there exists a market demand for it, it is evident that a part of this unlimited supply must be used to supply a part of the world demand for milk products, that is, be used in the manufacture of some of the lesser perishable milk products.

As a concrete illustration of this we will take a dairy community in New York State, which produces 225 ten-gallon cans, or a carload of milk a day. When this milk is produced under conditions required by the New York City Board of Health, it may be shipped as market milk to New York City if a buyer for it can be obtained. It may also be used locally for the manufacture of butter, cheese, condensed milk, or other dairy products. If this milk is used for the production of butter, cheese, or condensed milk, its value will depend upon the value of these products in the world's market, for there is an international trade in these products. The producers of milk in this community, unless their

product is produced to supply a special or local demand, are virtually in competition with all the milk producers supplying milk for the same market demand. Competition exists not only among the producers supplying milk to produce a single form of milk product, but also to some extent among producers supplying milk for use in producing the different products. Condensed milk is recognized as a competing product with market milk in many cities. If the price of one becomes excessive, it stimulates the demand for the other. The milk producers supplying a condensery are therefore in competition with the milk producers supplying fluid milk to any market where condensed milk is consumed.

EFFECT OF WORLD'S DEMANDS ON USES AND MARKET PRICES OF MILK

During the past year we have had some most excellent illustrations of the competition in the world's markets in bidding for a part of the milk supply to supply a world demand. Due to the increased demand for cheese, to supply the European armies, the market prices of cheese have advanced in all parts of the world. Butter, a less useful food for the armies, did not increase proportionately in price with cheese. It became more profitable, therefore, to convert milk into cheese than into butter, and, as a result, many creameries in New Zealand have been converted into cheese factories. Even here in New York State, some few milk-shipping stations have been equipped with cheese-making equipment, for it was more profitable to convert the milk into cheese than to ship it as market milk to New York City. Competition of this character is continually acting and tends to stabilize the world prices of not only the products of milk, but milk itself, for milk itself cannot continue long to have a lower market value than its constituents in the form of manufactured milk products.

RELATION OF MARKET VALUE OF MILK TO MARKET VALUE OF ITS CONSTITUENTS

The standardization of the market value of milk and of its constituents is dependent upon the free use that may be made of milk in converting it into the various milk products. The converting of the constituents of milk into the various forms of milk products is

fundamentally of greater importance to the producer and the consumer than to any other classes of people, for upon the extent to which milk is used to supply the various market demands depends not only the return to the producer, but also the price of it and its products to the consumer. In order to obtain a ready economic adjustment of the market value of milk to the market value of its constituents in the form of milk products, which may be manufactured from it, it is necessary that the power to convert at least a part of the milk into that product which will return to the producer the highest net return, remain in the hands of the producer. It is, therefore, economically wrong for the country milk stations, creameries, or cheese factories to be owned or be controlled exclusively by anyone other than the producers of the milk themselves, for to have the country facility otherwise controlled is to place upon the operator of the country facility an economic duty that he may not be able to render.

THE CONTROL OF THE COUNTRY STATION FACILITIES

Instances of distributors or dealers in dairy products who have found it advisable to relinquish their control over the facilities for production are noted in the butter and cheese industry. A number of years ago, wholesale distributors of each of these products owned and operated country creameries and cheese factories. Frequently they found themselves confronted with a local condition in which milk for market milk purposes had a higher value than for butter or cheese-making and to hold the farmers' patronage they had to meet competition by paying higher prices, which meant financial losses. To have converted the creamery or cheese factory into a milk-shipping station would have required that they engage in a business which was not properly a part of the regular business they were organized to conduct, namely, that of distributing at wholesale butter or cheese. Another condition, which sometimes arose, was that of having the product of their own factory cost them more than just as good a quality product, which they could have purchased from another factory. Butter and cheese distributors, therefore, generally have disposed of their country creameries and cheese factories as producing facilities. Frequently, we find cheese factories that are operated by a distributor under a

lease, the owners thereby having released temporary control of the use to be made of the milk.

Applying this general principle to the buying of milk, we find it to be uneconomical for a milk distributor to purchase a larger supply of milk than he requires for his market milk trade if its value when converted into milk products does not closely approximate its value for market milk purposes, unless he can buy the milk at a lower price than it is worth for market milk purposes. Similarly, unless market milk and condensed milk have approximately the same market value, it is not good economics for milk to be bought under those conditions that make it necessary to pay the same price for milk to be used for these two purposes. Milk-condensing companies engaged in the market distribution of both fluid and condensed milk have found themselves handicapped in trying to pay two different prices in the same locality for milk bought for these two uses. If the value of milk for these two purposes is greatly different and two different prices cannot be paid, then the price paid must be an average price of what milk is worth for both purposes, which would be less than it is worth for the one purpose and more than it is worth for the other. This necessarily means that one business is carrying a burden caused by the other, for, if its profit is made on the milk used for each separate purpose, the producer is receiving less or the consumer of one of these products is paying more than he should. An adjustment of the market price of milk to the market demand and value of it for different uses, therefore, would require that the purchase of milk to supply one demand be not complicated with its purchase to supply another. If milk for market milk purposes, where retail prices are rather constant, has a higher value than milk for other purposes where retail prices fluctuate with wholesale prices, then the producer would be able to obtain the highest price, when he is able to supply the distributor with approximately the exact quantities required for his market milk trade. To be able to do this and also be able to obtain the highest net return for the surplus not required for market milk purposes, the producer must provide and control the use of the facilities required to convert the surplus into those forms of milk products which will bring the largest net return.

PRESENT PRICES OF MILK PRODUCTS ABNORMAL

At present the prices of butter, cheese, and condensed milk in the world's markets are above normal. To some extent, these extreme advances are due to abnormal conditions in certain producing areas and an increased demand for these products on account of the European war. The price of milk for market milk purposes has also been increased due to a general demand for a higher price by the producer. There is not at present the inducement for creameries and cheese factories to be converted into milk-shipping stations that there will be later if market prices remain as they are and butter and cheese prices are again adjusted to normal conditions. The effect of an increased supply tends to lower prices, and it will not be surprising if milk prices also will decrease in accordance with the increased supply or at least to the basis of the market value of milk for manufacturing purposes, plus an amount to cover the cost of extra care and labor required to produce milk for market milk purposes.

MARKET GRADES AND STANDARDS FOR MILK

In the marketing of milk, grades and standards that recognize differences in quality are as important in facilitating equitable trading as in the marketing of other products. If there exists a demand for a superior quality of milk known as Grade "A," which the consumer may purchase at a higher price, the consumer should have some assurance that when he purchases Grade "A" milk, he is actually getting better milk than Grade "B." If Grade "A" quality milk requires extra care and labor in its production, then the producer is entitled to a higher price for it. Some progress has been made in the establishment of market grades of milk by cities. If state or Federal grades are to follow, and farms and shipping stations are to be licensed to market milk of the various grades, it would be highly advantageous for the country milk stations to be equipped so that milk may be quickly and accurately graded. Such facilities in the hands of the producers would enable them to contract to supply a demand for a certain grade of milk at the highest price obtainable for that particular grade. The markets for milk would be open to all producers, and distributors would not be burdened with the ownership

of country stations, which today limits to a considerable degree competition in the market distribution of milk.

When controlled by the producer, the country station should enable the producer to obtain the highest market price for his milk, either as market milk for city distribution or when converted into milk products. It also should result in the market price of milk being regulated by the law of supply and demand, as influenced by the market value of the constituents of milk when manufactured into the various forms of milk products for which there is a world demand.

This we may assume is the condition desired in order to establish the dairy industry upon a truly competitive basis when supply and demand will regulate market prices and cost of production in relation to market prices will limit the supply.

CHEESE MAKERS' CONFERENCE

GEORGE E. HOGUE, ARCADE, NEW YORK

MR. HOGUE: The first question for discussion will be: "What grade, if any, should be established for the quality of milk received at the cheese factory or the creamery?"

MR. J. L. GIBBY: It is not necessary that the milk should be of the same standard as required by the city board of health for the reason that milk that is too high in acid for city consumption in the liquid form, if free from taint and contamination, will make a fancy quality of cheese. It is safer, however, to hold your requirements up to a high standard and if the milk comes into the factory sweeter than necessary for making into cheese, commercial starter may be used for securing the proper acidity. If the standard of the milk is not held up to rigid requirements, while there may be no serious difficulty during cool weather, a hot spell may suddenly cause over-acid milk that will result in poor quality cheese and thus bring a great loss. There are many thousand dollars of losses each year from poor quality cheese, and it can mostly be traced directly to poor milk at the receiving station. As a rule the cheese maker who takes in no poor milk has no poor cheese.

MR. HOGUE: "From the dairyman's standpoint, is it profitable to enforce the pasteurization of whey?"

I know of a number of factories where the patrons require the whey to be pasteurized, and they pay the owner of the factory for the cost of the same, which is, I believe, about 10 cents per hundred additional for the price of manufacturing cheese. It would also seem that from all the reports we have had from the committees which have made investigations along this line tending to prove that disease is often carried to calves and hogs from feeding the whey without pasteurizing, a law should be enacted at the coming session of the legislature enforcing the pasteurization of whey and skim milk that is to be fed to calves and hogs.

MR. HOGUE: "At what price can cheese be manufactured and return a reasonable profit to the manufacturer?"

Can some one tell the price being paid in his section for manufacturing cheese?

MR. GIBBY: They are paying \$1.40 to \$1.50 a hundred in our section. This does not include the pasteurizing of the whey.

MR. ROBERTSON: The price in the northern part of the state is \$1.10 to \$1.20 a hundred.

MR. VAN HORN: It is \$1.10 to \$1.20 a hundred with us.

MR. HOGUE: I have been getting \$1.50 a hundred for manufacturing for several years back, and my patrons have made very little complaint. A few years ago, I asked a man who was owner of a large number of factories whether he had ever made careful estimates of all the items entering into the manufacture of cheese to find out exactly what it cost. He replied: "No, I never have." We sat down together and carefully went over all the different costs and figured them up, taking just the price for everything that he was paying at the time, and found that our total estimate was about 20 cents a hundred more than the price he was receiving from his patrons at the time.

The following is the price I have arrived at, figuring at present prices, this price being based on the flat cheese weighing about 35 pounds:

Cheese boxes. . . . .	.40
Rennet extract. . . . .	.15
Cheese bandaging. . . . .	.08
Fuel. . . . .	.20
Cloth circles. . . . .	.03

Color. . . . .	.03
Boards. . . . .	.02
Salt. . . . .	.02
Incidentals. . . . .	.05
Interest on investment. . . . .	.10
Management and bookkeeping. . . . .	.10
Depreciation and repairs. . . . .	.10
Labor. . . . .	.60
Insurance. . . . .	.05
Losses. . . . .	.05
Taxes. . . . .	.03
	<hr/>
	\$2.01

I understand that the price being paid in the northern part of the state is for cheese made into cheddars or twins instead of flats and this would make a difference of nearly one-half in the cost of the boxes or about 20 cents a hundred pounds.

MR. HOGUE: "Should the Babcock test be encouraged as a basis in paying for milk at the cheese factory?"

It seems that the time has come when all factories should be urged to adopt this method of paying for milk as the most equitable of any thus far in use. If we will notice the exhibit in the hall above, showing the different sizes of cheese made from a certain amount of milk of different tests of fat, we cannot fail to note that the paying for milk on the pool system is far from equitable.

Notwithstanding all that has been proved in this connection, there are still many dairymen who believe as much cheese can be made from low-testing milk as from milk with high test. They do not seem to have yet learned that the amount of cheese depends on the butter fat as well as the number of pounds of milk. I believe it is time the cheese manufacturers should adopt this basis for paying for milk. If they do not, they will sooner or later lose some of their high-testing dairies. You will only have to refer to some of your yearly factory statements and compare the April statements with the October statements to find that if it requires 12 pounds of milk for one pound of cheese in April, it will only require 9 pounds in the fall, when the milk is richer in fat.

PRESIDENT DANA: The meeting is now adjourned until this afternoon at 2:00 P. M.

FIFTH SESSION

THURSDAY, NOVEMBER 16, 2:00 P. M.

The meeting was called to order at 2:15 p. m. by President Dana.

PRESIDENT DANA: We now have the pleasure of listening to Senator Wicks.

DAIRY PROBLEMS IN NEW YORK STATE

HON. CHARLES W. WICKS, SAUQUOIT, NEW YORK

That the agricultural interests of this state have not been in a satisfactory condition for the past ten years has been plain to everyone who has given the matter any attention. Leaving the neighborhood of our large cities and driving over even the great trunk lines of our important highways, the traveler soon sees scattered about desolate houses and barns upon farms now practically abandoned, which twenty-five years ago housed vigorous families surrounded with farm wealth—where sturdy young men and women grew to maturity and were the hope and safeguard of the commonwealth.

In the neighborhood of these farms also and throughout all the state thirty or forty years ago, were the smaller agricultural homes of 5 to 10 acres occupied by flourishing families who had a great part in producing the agricultural wealth of the state, and who were contented, comfortable, and on the average more prosperous, healthy, and long-lived than the present population of factory towns with whom their descendants have largely cast their lot.

These small country homes seem almost to have passed out of our agricultural life. On a visit to the manufacturing centers it will be found that the sons of our farmers and dairymen are at work in machine shop or factory and living from hand to mouth in rented apartments or flats. The old fields and highways know them not. Here and there the Slav or peasants of southern Europe,

accustomed to life on the narrowest margin, have succeeded to the life that the native sons abandoned. Far and wide, over hills and dales, we find today the old people sticking to the farm, struggling along in a small way, while their sons and daughters have left the should-be-attractive homes seeking the ready money of the work shops. All these things are as well known to each member of this association as to myself. This is not as it should be.

The great agricultural interest of the state of New York must not be allowed to decay. The farm as a home, as a producer of real wealth in food and cattle, as a culture medium for the growth of the finest manhood and womanhood, must be maintained, or New York must lose its proud position as the Empire State. From the day of the Shepherd Kings until yesterday the surest sources of wealth in any state have been horses, sheep, and cattle. Where these have been abundant and the supply of milk, butter, and cheese abundant, famine and want cannot intrude. The prosperity, even the very life of our cities is dependent upon the farms of the state turning out daily an abundant supply of these mainstays of life and health both to the young and the old.

It is evident that any benefit to agriculture is a benefit to the entire state. No assertion can ring more true. It was with this thought that the Joint Legislative Committee to investigate dairy and agricultural conditions in our state became a reality last spring. It may not be entirely out of place to state to you that a small group attentive to existing conditions in our districts labored two or three years to accomplish our purpose and bring this committee into being. Eight others besides myself were designated for the work that has been carried on, month after month, through thirty and more counties, gathering first-hand information and listening to stories of hardships and burdens from thousands of farmers, victims of circumstances that they felt themselves unable to control and sufferers in many instances from abuses that only the state can remedy.

The abandoned farms, the lack of upkeep of the occupied ones, the decrease in cattle in proportion to the increase of population, the exodus of young men and women from the farm — all corroborate the evidence which this committee has received that for several years past farmers, under ordinary circumstances, were unable to

make both ends meet from the sale of their dairy products. The farmer has had little or no voice in naming the price that he was to receive for his product. To him came the large dealers or corporations saying, "For the present month we will give you so much for your milk, we will score your barns, we will test your cows, we will pay you what and how we choose." To the consumer, likewise, the dealer in all agricultural products has said at the same time, "You must pay us so much for your milk, your meat, your butter, eggs, and cheese."

Between these ever widening margins, millions of dollars have rolled into the bank accounts of the middleman; millions in which the farmer and his wife, rising at dawn, working until dusk, have no part. This committee has heard the same story of enforced privation in every section of the state. We have closely examined and crossexamined into these accounts and conditions. It is the same in every county. On the one hand we have as a class the dairymen laboring diligently with a herd of 15 to 25 milch cows and at the end of the year, by any fair system of accounting, he is \$250 to \$400 poorer than at its beginning. Others with the assistance of their wives and families may be \$50 or \$100 better off. Others, scores of them, discouraged and disheartened over conditions, have sold their homes and sought other means of livelihood — one less fraught with hardship and promising at least a living wage.

The records of this committee show, for one instance, that within a radius of a dozen miles in Livingston County during the past three years seventeen commercial dairy farms have abandoned dairying because of the prevailing prices. New York State cannot stand this. This industry is its very backbone. Its cities, with their millions, simply must have the products of the dairy and farm, but obviously they cannot have them in abundance and at a reasonable price unless a reasonable return for the labor is made to the producer.

We have all heard of the independent life which the farmer lives. Perhaps it is independent, if in the fullest meaning of the word we say that he is independent of everything but labor and money. The farmer may have enjoyed the title of "boss" but that does not provide for the inevitable rainy day. Nor does it

provide for the upkeep of buildings and fences, nor does it compensate for early hours and back-breaking labor, nor insure the continuance of the dairy industry. If reliance can be placed upon sworn testimony, apparently abundantly corroborated, the statement that at least two-thirds of the farmers in this state would be better off financially if they sold their homes, invested the proceeds of their farms and dairies, and proceeded to work as farm laborers at prevailing wages is abundantly proved.

The proof tends to establish that not over one-third of the farmers of this great agricultural state are making any profit at all. In other words while one-third are not breaking even, the other third is just about making 15 cents an hour for man labor and nothing for the farm women; the remainder whose bank accounts show slight gains made up generally of those who have engaged least in the dairy business.

Farm product prices have remained fixed or decreased while labor and dairy feeds have increased. Seventy-five years ago the farmer in this state could well put a sign over the gate reading about as follows: "This farm is a factory which buys nothing and needs sell nothing." The farm was largely self-contained. The barns and granaries, the cellar, and the larder were filled with stored wealth and surrounded by this wealth the farmer was really independent and led a most prosperous and happy life. At this stage such a life would be an economic waste to the individual and to the state as a whole. Our cities must buy from the farm and the farm must buy from our cities in order that all may live and prosper. But in this buying and selling such wizardry of merchandising has grown up and fastened itself on to the traffic that the operation of transfer from the city to the country and from the country to the city has been burdened with the support of a multitude of men so that both the producer and the consumer most bitterly complain.

According to the 1916 edition of *Moody's Manual* one distributor and manufacturer of dairy products during 1915 made a profit of \$7,600,000. Millions more of profits went into the bank accounts of the grain dealers. Not a single carload of grain could pass from a western farmer to an eastern dairy without at least a dozen superfluous middlemen attaching themselves to the transaction and levying a tribute upon the goods.

The grain merchants made millions and yet the producers of western grain in 1915 received only a moderate margin of profit, and you may be sure that the dairymen of New York State paid a tremendous price. To-day the dairymen of New York pay almost as large a price for the by-product of the distillery or starch factory as the grower of the grain received for it in its original state.

It would look, from the records of this committee, as though more middlemen were levying tribute between the producer and consumer than are actually engaged in production and their profits are substantially sure and much greater. How is it possible for this vast army to fasten themselves upon the shoulders of the producers and the consumers and draw from them this wealth? These men toil not, *but they do spin*, and I say unto you that Solomon in all his glory was not clothed like unto one of these. How is it possible for affairs to be so managed that two-thirds of every dollar which the consumer pays for the products of the farm goes to the merchant distributor? The cost of transportation and handling may well be a good sum, but the excessive cost of a useless and unnecessary army of brokers, buyers, and transfer agents is not justified either by political economy or by common sense.

You will find, if you investigate as we have, that this is made possible by the active association and organization of this army of middlemen and commission men into a compact union which has for its purpose the fastening of the whole organized body on the traffic; and who so manipulate and conspire one with another that the producer and consumer shall not be allowed to do business without their intervention and the paying to each class of a passing tribute. Acquaintance with their methods reminds one of the days of the robber barons in Europe, when every yard of cloth or pound of meat on its way to the market was assessed by each local lord whose gate it passed.

The committee secured a mass of correspondence of one of these associations, the Retail Feed Dealers Association of the State of New York, so-called. There were 300 members, more or less, with associates running into a couple of thousands. This correspondence revealed that this little association with its little capital and little investment had so fastened itself upon the great dairy industry of the state of New York that they were attempting to, and actually did, dictate by most unfair and possibly criminal means where and

how the dairymen of this state should buy their dairy feeds. This correspondence revealed that they were in touch with and being manipulated by larger associations of grain brokers, middlemen, and mill owners and that they were being taught their line of action so as best to bring the entire dairy industry of this state beneath their thumbs.

The individual dairymen were powerless as against this organization. Time after time we heard the pitiful stories of some progressive dairyman endeavoring to save a few hard-earned dollars who found the market absolutely closed to him by the manipulation of these schemers who sought to make him buy only of those they favored and at exorbitant prices. Even the general storekeeper who sought to aid his neighbors by procuring grains for them at a reasonable price was on the black list and deprived of his freedom as a citizen to purchase in the open market. I refer to this only as a type of the difficulties confronting producer and consumer.

Libel and slander were the least offensive of their methods, but I say to you that I believe that this was only the infant class of the great organizations of grain dealers, millers, and other middlemen in the United States. They have their trade journals, trade organizations, and agents in every legislative body, and they watch every law that may in the slightest degree affect their interests with an eagle eye. They have so managed that their profits are abundant and sure. But the dairymen, the producer, the consumer are unorganized or have been until very lately.

Farmers, as a rule, never keep books. Thanks to the farm bureau and the extension work at our agricultural colleges, an improvement is evident along these lines. The farmer is being aided to set down figures that will later on enable him to ascertain whether or not he is making a living from his herds and his acres. Many witnesses have come before this committee who could not state and did not know whether or not they were making or losing money on every quart of milk they sold. Their toil-worn hands bore testimony of labor performed. If they were to live at all, they had neither time nor opportunity to seek education along financial lines.

In the past ten years there has been a decrease of over one per cent in the cows of this state. To keep pace with the increased

population the number of dairy cows should have increased 10 per cent, and it would have been far better for the state had they increased 20 per cent. Cheese and butter production have left the state and gone westward. It is stated that we are losing approximately 100 creameries and cheese factories each year and that there are about that many new shipping stations established. If the farmer of New York State received the same income on his capital and the same labor return that the average skilled mechanic receives, butter would never sell again for less than 50 cents a pound nor cheese for less than 20 cents, unless very substantial reductions could be made in the cost of production and distribution.

I believe very substantial reductions can be made in the cost of dairy feeds to the dairymen and dairy products to the consumer by eliminating at least 50 per cent of the present army of middlemen who render no valuable or necessary service to the traffic. The practical solution seems to be that both the consumer and the producer shall co-operate in eliminating the unnecessary and useless middlemen, retaining only that middleman who renders fair services for fair compensation to the business. It is evident from the testimony produced before us that the farmer is doing something to help himself. He has learned to eliminate the cow that is "eating her head off." He is studying methods that will give him the best value from his lands and his herds. The State Legislative Committee has heard these stories from the St. Lawrence River to the Pennsylvania line and to Buffalo on the west. It has been asserted time and again that no cow can produce milk at a profit at present prices if its production falls below 6,000 pounds of milk a year.

The six thousand-pound cow is therefore one toward which it is apparently desirable for the dairyman to work, but allow me to state that there will be a great shortage in the supply of milk and all dairy products in this state if all the four- and five-thousand-pound cows are eliminated from the herds during the next three years, and the cost of these goods will be greatly increased.

In this investigation of agricultural conditions this committee has not started at the top, but at the bottom, going from place to place, endeavoring to secure evidence as to the actual workings of milk stations, creameries, and condenseries, as well as hearing the stories of the dairymen and farmers.

The committee is now about to visit New York, to investigate the distribution of milk, dairy products, and poultry in that city, and to ascertain, if possible, wherein the abuses lie and how they may be corrected. No whip is being held over individual or corporation. The farmer needs assistance we say, but in aiding the farmer the committee hopes primarily to aid the state and increase its most valuable asset — the dairying of New York.

Our investigations have had the support and cooperation of the Governor, the Department of Agriculture, the Dairymen's Association, the farm bureaus, and granges. Many unlawful practices have been revealed and given up to the searchlight of publicity. We have come across the milk station which made enough illegitimately, to more than pay the daily expenses of the station through holding over a shipment of milk in the cooler for a day, carefully skimming it, mixing it with the morning's milk, shipping the whole to New York City, and selling the first day's cream. Confronted with records that showed the unlawful practice, one manager of a milk station, when asked what became of the daily skimmed milk, which must have resulted from the cream shipment, replied that it was used up about the station, drunk, and what not. But the accumulation of skimmed milk soon amounted to sixty-five and forty quart cans. He changed his mind when his own records revealed such an enormous thirst and admitted that the skimmed milk was mixed with the new morning's milk and shipped as such into New York City.

The actual workings of the butter-fat test show such varying and uncertain results as to make it doubtful whether, as used in many small stations, it affords any real evidence of value or any honest measures of payments. It is fair to say that in the larger and more carefully conducted plants the milk tests seem to be authentic, reliable, and honest; but in a great many other instances the varying and uncertain results and the lack of skill of those who handle the milk were so apparent as to make it appear a most unsatisfactory measure of value and a handy tool for fraud. We have found many instances of practices by which cooperative factories were put out of business by what might be termed "professional disorganizing."

We have found a cheese market that went out of existence three years ago still making the market prices that regulated distant sections, and we have found in the correspondence of the State Retail Feed Dealers' Association, as has been stated, practices of so vicious a nature that the matter has been referred to the attorney-general. These are only certain matters to which I refer in order that you may understand that this committee has labored diligently to get the elemental facts that surround the daily activities of the dairymen.

The purpose of this committee has been to make a survey of the fundamental facts surrounding the dairy products — milk, livestock, cheese and butter, industries undeniably of supreme importance to the ten million residents of this state. In this work we ask you for your present and future cooperation. If the retail dealer, if the wholesale dealer, if the jobber and broker organize closely to watch and guard their interests, how important it becomes that the dairymen and farmers organize to protect themselves against aggressive action by other organized parties.

The idea may have become more or less public that this committee has been working to benefit the dairymen of this state, and only the dairymen, but that is not the primary purpose. The dairyman can take care of himself and his family in the way of milk, butter, and cheese, but the residents of the city are dependent upon the dairymen for these necessities of life. This state must have a dairy industry of such magnitude that the cities of the state in general may prosper and the people have an abundant supply of clean, wholesome product at prices that are fair to the producer and consumer. An abundant supply of dairy products to the people of our cities can only be assured by an abundant production, and an abundant production can only be maintained by a fair and reasonable return to the producer. Forty or fifty years ago millions of sheep grazed upon the farms of the state of New York. Our people were assured an abundant supply of wool and mutton. These have practically disappeared; in some sections it is charged from lack of protection from the ravages of stray dogs, in others because of prices that brought no reasonable return to the sheep farmer.

In this connection you, as dairymen, will pardon me for bringing before you and spreading upon your records a recent statement made to me by William M. Wood, president of the American Woolen Co., which I deem of great importance to the people of this state:

Hon. Charles W. Wicks,

New York Senate, Albany, New York.

Dear Sir:—I would most earnestly commend to your attention the campaign of the Philadelphia Wool and Textile Association for "more sheep and more wool." Though the population of the United States is rapidly increasing, the number of sheep and the amount of wool produced here are falling off. In 1909, 328,000,000 pounds of wool were grown in this country; in 1915, only 288,000,000 pounds, a loss of 12 per cent in seven years. In the last fiscal year, out of a total of 591,015,495 pounds of wool available for consumption in the United States, foreign wool represented 300,000,000 pounds, or more than one-half.

Nor can we depend upon wool supplies from abroad—for the wool production of the whole world is decreasing. This world supply in 1915 was estimated at 2,836,000,000 pounds. In 1914 the estimate was 2,872,000,000 pounds; in 1913, 2,880,000,000; in 1912, 2,971,000,000. The great war has wholly cut off certain sources of supply, and made reliance on others most uncertain. Large numbers of sheep have undoubtedly been destroyed in the course of warfare. So critical is the situation that Great Britain, which controls nearly two-thirds of the world's wool, is contemplating the imposition of an export duty on this indispensable raw material when bought by any but British purchasers.

National prudence demands an immediate increase in the flocks of the United States. The American people need more sheep, for food and clothing. In spite of the rapidity with which the cheap lands in the west have been taken up, there are still great areas in this country where sheep can be grown with a profit, by the exercise of intelligence and perseverance. Sheep can be grown again in large numbers on the abandoned pastures of the New England and other eastern states.

Australasia produces nearly three times as much wool as our own country—chiefly because Australasia wool growing is a modern, systematized business, and because all laws are made to favor it and worthless dogs are not allowed to harry and murder valuable flocks. National and State Government with us have done much to encourage agriculture and stock raising, but sheep and wool have not received their proper due. There is urgent need of a searching investigation of the whole question by National and State authorities. May I not ask you to take up the subject and do your share to the end that there may be more food and more wool for the American people?

All this is an essential part of any patriotic national movement for preparedness, for the position in which this country would find itself in war-dependent on foreign sources for more than half its wool—is appalling to contemplate.

Very truly yours,

WILLIAM M. WOOD,

President, American Woolen Company.

These figures are startling but truthful. Are we able in New York State to do our share to remedy this situation? I believe we are, but it will require courage and drastic legislation and active work by us—all in the coming session of the Legislature.

Shall the cows follow the sheep from the farms of New York State leaving a depleted soil and making our cities tributary to the west even for milk and cream and butter? The state of New York can ill afford to lose this industry, to see other states no better equipped but with a more active and interested state government, take the leadership from us. Ways and means must be devised to encourage and perpetuate the dairy farm. This has been and is the object of the joint legislative committee, to aid the agricultural interests of this state, both from a producer's and a consumer's standpoint; to attempt to provide that the one receives a living wage for his work and as necessarily to see that the other is not burdened with the cost of living out of all proportion to the necessary service of distribution.

This is particularly the problem of the state. The business of merchandizing dairy and food products is of as much vital importance to the state of New York as the business of banking or life insurance or the welfare of the employees in our factories. To prevent fraud, manipulation, combination, and conspiracy, to insure fair and open markets to everyone, to bring the product of the farm to the consumer at the least expense and with the least imposition of unnecessary tolls is very much the province of the state. And yet our state departments and statute books are peculiarly bare of enactments upon this subject. Any man or group of men, under present conditions, with a little cleverness can intrude upon this traffic, prevent its free operation, and demand an additional toll at any time or place. The ease of this intervention has been perceived by a multitude of quick-witted men, who by the most marvelous ways and the most intricate dealings have established toll gates surrounding the dairyman on the one hand and the consumer on the other, by which they have levied tremendous assessments upon the industry without giving any necessary service in return.

To make some recommendations which may reach this situation is the purpose of this committee. When this committee makes its report to the State Legislature it will need your help and your assistance in every way. You may be well assured that when we come to pass any constructive act in these matters the Association of Ice Cream Manufacturers with their attorneys will be at Albany

to exert pressure upon members of the Legislature to the end that the articles are written their way. The Retail Feed Dealers Association will be at Albany with their attorneys to see that the articles are written their way. The Miller and Grain Dealers Association will be at Albany to see to it that the articles are written their way, together with many other bodies with like purpose; and all these forces will combine to see that any constructive legislation is written according to their combined plans. Now I say to you that the New York State Dairymen's Association and all that it represents is greater and more important than these, and yet if you are not watchful your voices will scarcely be heard merely from inattention and lack of organization.

I therefore earnestly solicit not only the members of this association, but the dairymen of the state of New York, the grange and kindred bodies, the consumers of the state of New York, and also those engaged in manufacturing and distributing dairy products — because their interests are identical in the end with the dairyman and the consumer — to co-operate with this committee in every way, and to take such measures during the coming session of the Legislature and such intelligent action that their interests may not be overborne and lost sight of by the brisk work of those only interested in taking their profits from both producer and consumer while rendering little if any necessary service in the process.

PRESIDENT DANA: The next speaker on the program is the director of the Dairymen's League, Mr. Frank Sherman, of Copake, New York.

THE WORK OF THE DAIRYMEN'S LEAGUE

FRANK SHERMAN, DIRECTOR OF THE DAIRYMEN'S LEAGUE,
COPAKE, NEW YORK

Mr. President, Ladies, and Gentlemen: I want to say to you at the beginning that I have not come here with any set speech. I have come here for the purpose of bringing, perhaps briefly, a few facts to your attention in regard to the work of the league, and as a representative of the Dairymen's League, I am here to talk to you this afternoon.

I do not believe it is necessary for me to go into a resume of the work of our organization, but will confine my remarks this afternoon largely to the later day happenings and to our intent and purpose for the future. Perhaps most of you know that the league was incorporated under the laws of the state of New Jersey in the year 1907. Its purposes were to prevent and oppose monopoly in the sale of our milk and to encourage competition therein; to protect its stockholders, and the consumers against monopoly; to promote legislation and board of health ordinances favorable to our business, and to oppose those matters that were detrimental to it; lastly, to act as the agent of the dairymen in the sale of their product.

Now, men, for several years after the formation of our organization, we had a flourishing growth. We had a large increase in membership and during that period several attempts were made to get a conference with the large distributors of milk in New York City, with a view of having something to say with regard to placing a price on our product. We met with the same results each time, however, since they refused absolutely to have anything to do with us in regard to naming the price on the commodity which we were at that time manufacturing. Being numerically too weak to take a positive stand on the question of price, we directed our efforts more largely to matters pertaining to legislation. For two or three years prior to 1916, very little along the line of organization work was accomplished. The Dairymen's League seemed to have reached that stage in its activities when there was nothing more to do. The dairymen throughout the state had become luke-warm to the proposition. They seemed to manifest no desire for organization. Consequently, our organizers who were scattered over several states were called in because of their inactivity and their work did not pay. Our funds were fast becoming depleted and it was necessary for us to retrench and we did, so much so that in the year 1915, the entire receipts for that year were less than \$70 in our fund. During all this time of inactivity, there were other agencies at work that helped to bring about the desired result. Those agencies, men and women, were high-grade, educational factors that were opening the eyes of the dairymen of the state as they were never opened before; and I want to take

this opportunity to express my appreciation of the good work of the farm bureau associations of this state and of the excellent work of the cow-testing associations, which have been such a powerful factor in bringing about this condition.

We appreciate these things. They have brought the dairy farmers face to face with a condition which they had never known before, and I hope to see the day not far off when a farm bureau association will be established in every county of the state of New York. We need these things, men and women, because without such educational factors the dairy business cannot be placed upon a sound financial basis, and that is one of the reasons why these things have led up to the present conditions.

Then what happened after the price of milk was made in the fall of 1915? With all the elements that go into the cost of production gradually increasing, and with starvation facing the dairy farmers, there was no other alternative for them except to send out the organizers all over this state and five other states for that work.

There was a strong sentiment expressed among certain members at the last annual meeting of the stockholders for definite action to be taken. We talked the situation over. We concluded at the January meeting that it would be unwise in view of the great production of milk at the spring freshening period, to take any definite action at that time, so we directed our efforts more to the organization work, and said, "We will wait until the fall contract time, and then we will make our stand." At the June meeting, the dairymen of Chenango County, one of the greatest dairy counties in the state, came down to Albany with a force of men and with resolutions calling for specific, definite action at the fall term. The executive committee, of which I am one, set in motion the wheels of our organization and called out every available organizer to go into all the territory that was supplying milk for the market, organizing every dairyman who had a cow, and who was making milk for the market. We were empowered at that time to map out a final plan of action and to arrange a schedule of prices, and by vote of the board of directors, we were empowered and made exclusive agent for the sale of milk.

What did we do? We told the directors to go home and to get right into the game as hard as they could, and try to organize and

get all the influence they could along their lines to help get the farmers into the game. We were going to make a stand for prices in the fall, and we asked them to go to their local branches and to ask the dairymen, and have them submit a list of prices which would be acceptable to them. The different directors from the different local communities brought in the price lists and from those different prices submitted, we had a basis for the formation of our price. Some suggestions were made there as to making the price rather well up. Then some one suggested that it would be easier to come down than to go up. My attitude was this: I said "No. The only way I will be a party to a proposition of this kind is this: You must let the dairymen of the state know absolutely the minimum price that you are going to stand for and then stand for that price, and stand or fall on that proposition. I will not place myself in a position where a finger of suspicion can be pointed at me. We must have the confidence of every single milk producer in this state if we are going to have a stable organization." Men, without that, you have no stable organization, and I say to you now, if there is anyone in that organization that you have not confidence in, I want you to put him out, because he has no business there. This organization is your organization, and there is no glory in this milk strike that has been won except to the man who stayed back on the farm and held his milk until ordered to deliver by the executive committee. He is the man who is getting the credit for it. I do not take any credit upon myself, although I did put in three weeks of hard work.

After the executive committee had been authorized to make this sale, we immediately got in touch with the Department of Foods and Markets, for that, being a state agency, we concluded would be the logical place for us to seek aid in the sale of our milk. In consequence we enlisted the services of the department, but the dealers absolutely refused to recognize the league or to deal with the Commissioner of Foods and Markets, but said they were going to buy of the individual farmers as before.

COOPERATION

Now, I am very much pleased and gratified to think today that this one supreme thought has been brought so closely to your atten-

tion — the matter of cooperative plants in the country. I am convinced that the very foundation of our permanency depends absolutely in our owning and controlling the plants in the country. That was brought more forcibly to my mind during the strike than anything else. Now, I tell you, men, that every cooperative plant in the state of New York, Pennsylvania, or New Jersey that had a pasteurizer and facilities for pasteurizing milk, according to the requirements of the New York City Board of Health, had no difficulty at all. The milk was going in, and we had people ready to buy it, but the very fact that the pasteurization of milk was required in New York City had made it impossible for us to get milk into the city. Now, if these are the conditions which confront us as dairymen, it is up to us to meet these conditions — to be on hand and have cooperative creameries established all over the state. Then if a strike should come again, we would have the situation in our own hands. I believe this is absolutely necessary from every standpoint. There is no question but that we must place ourselves in a position to take care of a certain amount of milk at certain times of the year. Let me say to you now, men, that that has been one of the foundations of low prices. If they are compelled to buy 75,000 cans of milk a day, and have sale only for 50,000, they would base their price upon the value of the surplus they had. That was the price that you got for the milk.

I want to say just a few words more in relation to what we are doing at present. We are having calls all the time for organizers to go out in the fields and to organize new local branches. Calls are coming to us continuously from all parts of the state of Pennsylvania, Vermont, Massachusetts, Connecticut, and in fact we have had them way up in northern New York, along the Canadian line, and it is our purpose to send out our organizers and to organize all that territory.

I hardly know sometimes what to say in regard to legislation. I am going to say to you now, that we have under consideration, although they have not yet been named, but they will be named, a legislative committee, the same as you have already named, and the same as every other agricultural organization ought to name, because it is a fact that the agricultural interests of the state have not been represented along agricultural lines, and it is one of our functions, I believe, as an organization representing the dairymen,

to have a legislative committee, who are to look after the interests of the dairymen of this state. We are going to have that committee, and they are going to be on the job down in Albany. They are going to work in connection with the dairymen's association of the state; and, they are going to ally themselves with other movements that tend to increase the interests and the influence of the agricultural people of the state of New York.

I speak of this because I believe it is one of the obligations of the league. We are also going to take up and send out statements throughout the state, and we are going to have some of the large manufacturers of dairy appliances submit plans (I believe they have them for cooperative creameries), and we are going to try to cooperate with the different localities with a view of establishing cooperative creameries upon a sound financial basis in the different parts of the state.

I am not going to weary you very much longer with these remarks because they are rambling. I did not think it was a part of wisdom to come here with any set speech, because I simply wanted to bring the facts to you as I knew them. I wanted to tell you just about what we expected to do; what our intentions and purposes were in the future; and I want to ask your cooperation.

Go back home now, and use your influence, and I know you will go back home with that view, and filled with animation to do the things which we believe you can do, and have done; and try to make the league stronger in your respective township than it was ever before. And I ask you to make an appeal to the executive committee of the league for assistance wherever it is needed, and we promise you to cooperate and to extend the organization in every quarter of this great state.

When this work is done; and we have established and maintained the principles for which we have fought permanently, then the time will have come when these great distributors of milk can no longer say to us, "You must sell your milk at our price." Those principles, I believe, for which we are fighting, are worth more to us than all the dollars. We are the ones to set the price on our own commodity, and when we have maintained that principle, we will have accomplished one of the largest propositions that has ever confronted the dairymen of the Empire State.

SIXTH SESSION

NOVEMBER 16, 1916, 8:00 P. M.

ELECTION OF OFFICERS AND COMMITTEES

OFFICERS

President, George E. Hogue, Arcade.
Vice-President, Oscar F. Soule, Syracuse.
Secretary, S. C. Shaver, Albany.
Assistant Secretary, T. E. Tiquin, Albany.
Treasurer, R. R. Kirkland, Philadelphia, New York.

DIRECTORS :

E. G. Dietrich, Syracuse.
Frank Sherman, Copake.
W. J. Stocking, Jr., Ithaca.
W. N. Giles, Skaneateles.
Henry L. Grant, Copenhagen.
Loton Horton, New York City.

LEGISLATIVE COMMITTEE :

Dean H. E. Cook, Chairman, Canton.
W. N. Giles, Skaneateles.
A. L. Brockway, Syracuse.
F. H. Thompson, Holland Patent.
I. H. Von Bomel, New York City.

MEMBERSHIP COMMITTEE :

Oscar F. Soule, Syracuse.
J. L. Gibby, Arcade.
H. C. Lange, New York City.
S. C. Shaver, Albany.
R. S. Bennett, Cortland.

MR. ROBINSON: Gentlemen, the committee on resolutions has seen fit to adopt or to favor the following resolutions:

Resolved, That the New York State Dairymen's Association shall appoint a standing committee of five on legislation.

Adopted on motion duly made and seconded.

Resolved, That the committee recommend that the New York State Dairymen's Association refer to the Legislative Committee the question of some proper method of standardizing milk and dairy products.

Adopted on motion duly made and seconded.

Resolved, That the matter of any further needed legislation or revision of present laws on buying and selling milk on the basis of the butter-fat test be referred to the Legislative Committee.

Adopted on motion duly made and seconded.

Resolved, That the New York State Dairymen's Association urge upon the coming legislature the appropriation of a sufficiently large sum of money to enable the Commissioner of Agriculture to carry out a broad and comprehensive campaign of publicity, showing to the people of this state the food value of clean milk and dairy products.

Adopted on motion duly made and seconded.

Resolved, That the New York State Dairymen's Association recommend the butter-fat test basis as the most equitable method for buying and selling milk yet devised.

Adopted on motion duly made and seconded.

Resolved, That the New York State Dairymen's Association view with gratification the organization of the Dairymen's League, and believe that as a result of that organization and the possible cooperation with the distributors of milk great and permanent good eventually will result to both dairymen and distributors by providing a sound business basis for determining equitable adjustments for all common interests.

Adopted on motion duly made and seconded.

Resolved, That we pledge our most hearty support to Commissioner Wilson and his department in all their efforts to safeguard and develop the dairy interests of the state and express our appreciation of his sincere and earnest efforts in the past.

Adopted on motion duly made and seconded.

Resolved, That this association place itself on record as favoring the strict enforcement of Civil Service regulations in the appointment of state agents to enforce the agricultural law, to the end that only men of training and ability shall be appointed to such positions.

Adopted on motion duly made and seconded.

Resolved, That this association place itself on record as favoring a state-wide law compelling the pasteurization of whey and skim milk where used as a by-product to be fed to live stock. That a copy of this resolution be placed in the hands of our Legislative Committee with power to act.

Adopted on motion duly made and seconded.

Resolved, That the New York State Dairymen's Association is under special obligations to the city of Syracuse for its hospitality; to the National Guard for the use of the armory, and the many courtesies extended; the Chamber of Commerce who, as hosts, have left nothing undone to make our stay in the city pleasant and agreeable; and we specially commend his Honor, Mayor Stone, who in his cordial address of welcome, set a new pattern and came with it personally, and not perfunctorily done by some subordinate.

Resolved, That Syracuse takes high rank as a convention city.

Adopted on motion duly made and seconded.

Resolved, That the members of the New York State Dairymen's Association heartily endorse the sincere and conscientious efforts of its President, W. E. Dana, and all other officers, in promoting and directing the activities of this organization and in making this convention one of the best in the history of the organization.

Adopted on motion duly made and seconded.

WHEREAS, This association has, since its last regular meeting, suffered a severe loss by the death of one of its honored members of the Board of Directors — Mr. M. Wiard of Avon; therefore be it

Resolved, That it go on record as fully appreciating Mr. Wiard's efforts on behalf of this association; and, extend its sympathy to his family and relatives.

BY-LAWS OF THE NEW YORK STATE DAIRYMEN'S ASSOCIATION

Section 1. The membership in the New York State Dairymen's Association shall consist of annual and life members. Annual members shall be those persons who pay annual dues of one dollar into the treasury of the association. The fiscal year of the association shall end August 31. The secretary of the association shall notify each annual member prior to the end of the fiscal year, August 31, when his dues are to be paid. Upon nonpayment of annual dues before the end of the fiscal year, a member shall be dropped from the list of annual members. A person paying ten dollars into the treasury of the association shall become a life member and exempt from annual dues. Honorary members may be elected by a majority vote at any annual meeting of the association in recognition of service rendered to the dairy interests of the state, and they shall be entitled to all the privileges of members except voting for officers.

Section 2. The full management of the affairs of the association shall be in the hands of a board of directors, which shall consist of the president, secretary, assistant secretary, and treasurer of the association, ex-presidents as provided in section four, and six elected members.

Section 3. The association shall hold an annual meeting at such place as shall be determined by the board of directors, to commence on the second Tuesday in December, unless some other date shall be selected by said board. At such convention at least two sessions shall be devoted to subjects concerning butter and cheese-making.

Section 4. Elective officers of the association shall be president, vice-president, honorary vice-presidents, secretary, assistant secretary, treasurer and six directors, and they shall be chosen at the time of each annual meeting from among either the life or annual members of the association, and at the session during which the election of officers is indicated on the program. Every ex-president of the association shall be ex-officio member of the board of directors for two years after the expiration of his term of office as president.

The officers shall enter upon the duties of their respective offices thirty days after election and shall hold office for one year, or until their successors shall be duly elected and qualified.

Section 5. No person shall be eligible to the office of president of this association for more than two years in succession. The president shall be ex-officio chairman of the board of directors.

Section 6. The vice-president shall perform the duties of the president in his absence.

Section 7. The secretary shall keep the minutes of all meetings, be ex-officio secretary of the board of directors, and in case an exhibition of apparatus and products is held, the usual duties of a secretary of such an exhibit shall devolve on him. He shall conduct the correspondence of the association, receive all moneys due it, and promptly remit the same to the treasurer.

Section 8. The assistant secretary shall perform such duties as may be assigned to him by the secretary.

Section 9. The treasurer shall receive the moneys from the secretary, keep a strict account thereof and pay them out on the order of the secretary.

Section 10. The books and accounts of the secretary and treasurer shall be examined by an auditing committee to be appointed at each annual convention by the president.

Section 11. The board of directors shall decide each year whether or not an exhibition will be held in connection with the annual convention; and in case an exhibition is held, the president, secretary and treasurer shall constitute an exhibition committee, which shall have full charge of the exhibition and authority to enter into necessary contracts. This committee shall also have power to annul the exhibition if circumstances so require.

Section 12. Public notice of any regular meeting of the association shall be given by the secretary at least thirty days before the date of the said meeting, and a written or printed notice of said meeting shall be mailed to each member of the association. All meetings of the board of directors shall be called by the president or by any three directors. The secretary shall send to each director a notice of any meeting at least three days before the date of its occurrence.

Section 13. Any vacancy which may occur in the board of directors or in any office of this association, may be filled by the board for the unexpired term for which such officer was chosen.

Section 14. The place of business of this association shall be where the secretary has his residence.

Section 15. At each annual meeting the newly elected president shall appoint such committees as he may see fit from among members of the association, the president and secretary to be ex-officio members of all such committees.

Section 16. The board of directors shall require the secretary and treasurer each to give a good and sufficient bond.

Section 17. A quorum of the board of directors shall consist of five members. A majority of the members of any committee shall constitute a quorum.

Section 18. These by-laws may be amended by a majority vote of the members of the association present at any annual meeting, provided a copy of the proposed amendment has been transmitted to the members of the association with the notice of the said meeting.

NEW YORK STATE DAIRYMEN'S ASSOCIATION

ANNUAL MEMBERS

A

Adams, David, Clayton.
Adams, Herbert A., Manlius.
Ahlheim, George, 16-18 Philip St., Albany.
Anderson, E. H., Room 100, N. Y. C. Station, Rochester.
Ashboken, G. P., Evans Mills.

B

Baier, E. F., Silver Springs.
Bailey, John H., Syracuse.
Bailey, C. H., Mannesville.
Bailey, E. M., 3001 Liberty Ave., Pittsburg, Pa.
Barlow, Charles, Vernon Center.
Barringer, William M., Conewango Valley.
Baumert, F. J., Antwerp.
Bean, Orrest H., 552 Riverside, Elmira.
Beardsley, A. C., Arcade.
Beaupre, Arthur W., Amboy.
Becker, L. C., Philadelphia, N. Y.
Beckwith, James S., Albion.
Bennett, R. S., Cortland.
Blount, A. T., Lacona.
Bodurtha, J. R., Utica.
Boshart, C. F., Lowville.
Brearly, R. W., Seeley Creek.
Breed, R. S., Geneva.
Brockway, A. H., 3rd National Bank Bldg., Syracuse.
Brown, Marvin, Cuba.
Brown, E. R., Watertown.
Burdick, G. A., 624 Academy St., Watertown.

C

Caner, A. L., Conewango Valley.
Carpenter, W. F., Gouverneur.
Carroll, Mrs. John, Kanona.
Clausen, F. B., Varysburg.
Clickner, R. L., Watertown.
Cobb, E. E., 11 Pine St., New York City.
Cochran, Mrs. W. G., Kanona.
Cohn, M. F., 234 Potomac Ave., Buffalo.
Cooley, L. H., So. Dayton.
Cooney, M. J., 118 W. Willow St., Syracuse.
Corsu, F. D., Sandy Creek.
Craig, J. S., Ogdensburg.

D

Dana, W. E., Avon.
Dickhaut, George M., Theresa.
Dietrich, E. G., 242 W. Jefferson, Syracuse.
Doig, John T., 36 Union St., Walton.
Doig, William C., Walton.

F

Farrington, H. F., Lowville.
Fink, Frank W., Care of D. H. Gowing & Co., Syracuse.
Fisk, W. W., Ithaca.
Ford, E. B., Branchport.
Fortune, W. F., So. Hammond.
Fox, L. D., Barnes Corners.
Fredericksen, J. D., Little Falls.
French, R. A., Rochester.
Fults, H. W., Sterlingville.

G

Gilbert, Allen, Mannesville.
Giles, W. N., Skaneateles.
Goodison, Luther, LaFargeville.
Goodstate, George, Philadelphia, N. Y.
Gowing, D. H., Jr., 242 W. Jefferson St., Syracuse.
Gracey, W. E., Blackriver.
Guthrie, E. S., Ithaca.

H

Haggart, James C., LaFargeville.
Hall, S. A., Watertown.
Hannahs, J. M., 127 Park Ave., Watertown.
Hargrave, A. B., Heuvelton.
Hartman, J. M., Whitesville.
Hibbard, R., Pharsalia.
Hoard's Dairymen, Fort Atkinson, Wis., Care of H. H. Lyon.
Hodge, J. R., Parke, Davis & Co., New York City.
Hogue, George, Arcade.
Hunter, Ross, Plessis.

I

Illston, J. W., 41 Clayton Ave., Cortland.
International Con. Record Assoc., 766 Maple Ave., Elmira (Herbert Jones, Secretary).

J

Jewett, W. B., Evans Mills.
Jones, H. E., 101 West St., Syracuse.
June, H. J., Hornell.

K

Karlen, William F., Boonville.
Kingman, Mrs. Alice, Castle-on-Hudson.
Kinnie, Penley, Harrisville.
Kirkland, R. R., Philadelphia, N. Y.

L

La Fave, J. A., Theresa.
Lagerquist, E., 802 Fulton St., Brooklyn.
Lange, H. C., 100 Hudson St., New York City.

M

Machold, H. E., Ellisburg.
McKenzie, J., Brownville.
Madsen, C., Pavilion.
Martin, W. S., Dickenson Center.
Mascwell, M. J., Adams.
Mayer, Charles J., Attica.
Miller, S. H., Selkirk.
Morris, E. H., Warsaw.
Murray, J. I., 219 Bird Ave., Buffalo.

O

Ormsbee, John, 9 Liberty St., Utica.
Overton, F. C., Adams.
Overton, F. C., Jr., Adams.
Overton, K. A., Adams.

P

Parks, W. J., Mexico.
Peach, W. J., Pulaski.
Perry, C. R., Jasper.
Petrie, George, So. Hammond.
Philpot, H. J., Canton.
Porter, Dr. E. H., 517-519 E. 132 St., New York city.
Powell, E. A., 904 W. Genesee St., Syracuse.
Purcell, William M., Sterlingville.

Q

Quaterman, Fred A., 14 Seminary St., Auburn.

R

Randall, S. T., R. D. 2, Adams.
Redfield, F. R., Adams.
Reese, H. A., Lowville.
Reynolds, F. C., Alfred Station.
Robertson, F. E., Waterown.

Rockefeller, G. W., 240 Cortland Ave., Buffalo.

Rogers, C. A., 32-34 Goldsmith Ave., Detroit, Mich.

Ross, H. E., Ithaca.

Runyon, H. J., c/o J. D. Stout & Co., 19 Jay St., New York City.

Rutherford, Thomas, Madrid.

Rutteube, A. J., 17 Crossman St., Jamestown.

S

Sackett, C. E., Utica.

Shedrick, S. C., Queen City, Buffalo.

Smith, Edwin, Farm Bureau, Norwich.

Smith, John S., Arcade.

Smith, Wing R., R. D., Syracuse.

Somes, L. M., 50 S. Arlington Ave., E. Orange, N. J.

Spaulding, B. C., Potsdam.

Spink, L. D., Attica.

Stanley, E. C., Varysburg.

Staplin, F. H., Mannesville.

Stewart, A. A., Theresa.

Stocking, W. A., Ithaca.

Storck, George, Rome.

Strickland, S. M., Carthage.

T

Thompkins, George R., Parke, Davis & Co., New York City.

Thompson, C. S., Vernon.

Thompson, W. E., Kirkland.

W

Walton, J. H., Palmyra.

Washburn, C. S., Clinton Corners.

Washburn, G. H., Philadelphia.

Way, Dr. C., 108 Hudson St., New York City.

Weatherup, F. W., Brasie Corners.

West, J. W., Seminard Ave., Binghamton.

Whaler, J. H., Rome.

Willey, E. J., Oneida.

Williams, C. B., Oneida.

Wilson, C. A., Theresa.

Winters, Harry B., 61 So. Lake Ave., Albany.

Woodward, M. H., Gouverneur.

Z

Zimmer, Louis, LaFargeville.

LIFE MEMBERS

A

Aldrich, H. G., Gouverneur.
Allen, L. L., 141 Park Ave., Watertown.
Andrews, R. D. 4, Moravia.
Austin, H. E., Cuba.

B

Babcock, F. M., Gouverneur.
Bailey, Prof. L. H., Ithaca.
Baird, J. H., Speedsville.
Baker, A. W., Genoa.
Baker, J. V., 201 East Main St., Gouverneur.

Barnasky, Geo. W., Greene.
 Barnett, Maurice, 11 Pine St., New York.
 Bassett, R. N., Burke.
 Bauder, F. W., Fort Plain.
 Baumert, Chas. H. J., Antwerp.
 Baumert, Jos. A., Antwerp.
 Beachnut Creamery Co., 84 Wolcott St., Leroy.
 Bean, M. C., Academy St., McGrawville.
 Beardslee, W. E., Arcade.
 Beebe, Verlett C., Arcade.
 Bent, Roy H., Antwerp.
 Blanding, Frank, Hubbardsville.
 Blish, Otis, Halcott Center.
 Bodurtha, F. P., Bainbridge.
 Bradley, E. C., Madrid.
 Brainardsville Creamery Co., Brainardsville.
 Brown, A. B., Cincinnatus.
 Brown, A. E., State Fair Commission, Syracuse.
 Brownell, William, 74 John St., New York.
 Buckley, Wage, Port Jervis.
 Bull, Geo. E., Rural Hill.
 Burger, Chas. F., New York.
 Burlingham, W. F., Frewsburg.
 Burrell, Loomis, Little Falls.
 Burrell, E. J., Little Falls.
 Butts, M. N., Cuba.

C

Campbell, Arba, Oswego.
 Carman, Geo. W., Mecklenburg.
 Carpenter, R. W., c/o Onondaga Milk Assn., Syracuse.
 Carr, Frank J., Tully.
 Chandler, Herbert G., 197 State St., Ogdensburg.
 Cheney, Newel, Poland Center.
 Childs, S. A., Malone.
 Church, Seth R., Syracuse.
 Clark, A. L., Copenhagen.
 Clark, Harry N., Potsdam.
 Clark, Manly, Suffolk.
 Clarke, C. T., Canton.
 Cochran, Wm. F., East View.
 Cogswell, P. J., 1757 East Ave., Rochester.
 Cole, B. J., East Aurora.
 Collier, D. M., Savona.
 Comstock, W. G., R. D. 2, Clinton.
 Converse, F. A., 200 Pearl St., Buffalo.
 Cook, H. E., Canton.
 Coons, Samuel.
 Cooper, Geo., Morristown.
 Cotton, A. S., Clifton Springs.
 Councilman, J. F., R. D. 2, Newark Valley.

Crapser, B. S., Waddington.
 Crittenden, Amos G., Cincinnatus.
 Cuddeback, Benj. E., Port Jervis.
 Curran, Edward, Utica.
 Curtis, Albert W., Utica.

D

Daniels, W. H., Ogdensburg.
 Dawley, F. E., Dotshome Farms, Fayetteville.
 Davendorf, Abram, Minden.
 Dillon, John J., 333 W. 30th St., New York.
 Dockstader, M. W., Evans Mills.
 Douglass, O. C., Chateaugay.
 Dryden, G. J., Copenhagen.
 Dunaway, F. P., Watertown.
 Dunham, W. C., Cuba.
 Dusenbury, E. G., Portville.

E

Eastman, Almond R., Waterville.
 Eastman, R. S., Belleville.
 Eibert, Henry, R. D. 3, Skaneateles.
 Elwood, H. C., Morgan Bldg., Buffalo.
 Ely, L. D., 82 East Blvd. S, Rochester.
 Ennis, J. A., Pattersonville.
 Erickson, Henry, Kennedy.
 Everett, E. A., Potsdam.

F

Farmers Coöperative Creamery Co., Crown Point.
 Fauson, F. W., Bergen.
 Fisher, A. E., Madrid.
 Fitch Bros., Morris.
 Fitzgerald, L. J., Cortland.
 Flanders, Geo. L., Dept. of Agriculture, Albany.
 Fowler, Ralph C. H., 8 Hoffman St., Auburn.
 Fredericksen, J. D., Little Falls.
 French, R. A., 430 Mercantile Bldg., Rochester.
 Fulton, J. E., Carthage.

G

Genesee Salt Co., Piffard.
 Gilbert, Harris, Sidney.
 Giles, W. N., Skaneateles.
 Gillespie, Geo. J., 20 Vesey St., New York.
 Gillett, Eilson G., Marcellus.
 Gilmour, Robert, Morristown.
 Godfrey, F. N., Olean.
 Goodrich, D. A., R. D. 3, Copenhagen.
 Gordon, M. E., Rushford.
 Gordon, Seth, Chazy.
 Grant, H. L., Copenhagen.
 Grant, R. P., Clayton.
 Gray, Stephen H., Elmira.
 Green, Wilson, Willett.

Gregory, M. C., Unadilla.
Griffith, William D., Oakwood.
Griffith, W. E., Madrid.
Groff, Floyd B., St. Johnsville.

H

Hall, Fred P., 211 Lake View Ave.,
Jamestown.
Hall, Lott, Gouverneur.
Hall, William A., 11 Pine St., New
York.
Halliday, Jas. E., Massena.
Hapgood, ———, Malone.
Hargrave, A. B., Heuvelton.
Harkness, E. R., Delhi.
Harrington, A. D., Oxford.
Harrington, O., North Bangor.
Harter, G., Otisco.
Harter, I. S., Otisco.
Hayes, Fred J., Potsdam.
Heller & Mertz, New York.
Helmer, A. E., Evans Mills.
Hobart, W. M., Friendship.
Hogue, Geo. E., Arcade.
Hogue, Jas. A., Angelica.
Holliday, Frank, Massena.
Hollingworth, W. G., 58 Lafayette
St., Utica.
Hotten, Nicholas, Franklinville.
Howard, W. R., R. D. 2, Newark
Valley.
Hungerford, William, Ithaca.
Hunt, I. S., Adams.
Hunter, John, Sterling Valley.
Hyde, Fred W., Jamestown.
Hyde, Geo. H., R. D. 4, Cortland.

I

Isbell, E. C., Cattaraugus.

J

Jackson, D. C., R. F. D., Boonville.
Jay, Albert H., 193 Elm St., Utica.
Johnson, Allen, Malone.
Jones, E. L., Delevan.
Jones, Frank L., 26 Broad St., Utica.
Jones, O. E., Jamestown.
Jordan, Dr. W. H., Geneva.

K

Kay, William E., Genesee St.,
Herkimer.
Keeney, F. B., Warsaw.
Keller, W. H., Fulton.
Kellogg, O. U., Cortland.
Kelly, Dr. W. H., 233 Western Ave.,
Albany.
Kent, D. E., Lowville.
Kilmer, C. B., Rock City Falls.
Kinne, H. E., Jr., Syracuse.
Kirkland, Robt. R., Philadelphia.
Knapp, B. R., R. D. 1, Cortland.

Knapp, C. L., Lowville.
Knapp, W. H., Cortland.
Knox, H. M., Canton.

L

Lalone, Judson A., Richville.
Lamont, C. M., 363 Front St., Owego.
Lange, H. C., 100 Hudson St., New
York.
Langwill, Peter, Rochester.
Lanton, A. W., Auburn.
Law, Dr. James, Ithaca.
Lawson, W. H., New York.
Livingston, John, New York.
Lyon, F. M., Hobart.

M

McAdam, W. H., Heuvelton.
McAlliser, Geo. D., Antwerp.
McBane, A. D., R. F. D., Clarkson.
Maine, G. G., Lisbon Center.
Marschall, A., Little Falls.
Martin, Geo., Ithaca.
Mason, C. C., Burke.
Mather, A. G., R. F. D., Adams.
Mather, J. J., Bishop Street.
Matther, W. A., Adams.
Maxon, Grove, Cortland.
Merrell Soule Co., Syracuse.
Merry, Fred H., Verona.
Miles, Ira C., Edwards.
Miller, D. H., R. D. 1, Adams.
Miller, Dr. P., New York.
Moore, Dr. V. A., Veterinary College,
Ithaca.
Moreland, Forest K., 16 Ford St.,
Ogdensburg.
Morris, Dr. C. D., Paulina.
Morris, J. M., Liberty.
Mott, Frank, Cuyler.
Munson, E. S., Franklin.

N

Norton, E. P., Attica.

O

Oakes, Frank S., Cattaraugus.
Odell, B. B., Jr., Newburgh.
Older, Clyde, Kennedy.
Older, M. A., Ellington.
Oliver, Arthur, Chateaugay.
Omsbee, John B., 9 Liberty St.
Oster, J. E. F., Borodino.
Otis, R. C., Denmark.
Overton, F. C., Adams.
Overacker, A. W., Gouverneur.
Owens, Jas. H., Chemung.

P

Paddock, Ruth, Malone.
Partridge, O. T., Ogdensburg.
Patrick, W. C., Sherman.

Peabody, F. H., Ithaca.
 Pease, Ira, Oswego.
 Peck, B. M., Phillips Creek.
 Peck, Leon L., R. D. 2, Kanona.
 Peck, W. H., Syracuse.
 Peckham, V. E., Jamestown.
 Peer, F. S., Mt. Morris.
 Perrin, Walter R., Gouverneur.
 Pervis, Robt., Cortland.
 Petrie, S. W., 440 Federal Bldg., Buffalo.
 Polly, Lafayette, R. F. D., Watertown.
 Powell, E. A., 904 W. Genesee St., Syracuse.
 Powell, Geo. T., Ghent.

R

Reed, J. W., R. F. D., Gouverneur.
 Rees, H. A., Lowville.
 Reynolds, Thos., R. D. 4, Malone.
 Richardson, H. W., East Aurora.
 Richardson, S. B., Lowville.
 Riggs, H. W., Albany.
 Risley, J. M., Rhinecliff.
 Robinson, Sidney, Malone.
 Roby, Dr. Joseph, 23 Culver Rd., Rochester.
 Rockwell, B. C., Westville Center.
 Roger, S. R., Sidney Center.
 Rosemary Creamery Co., John F. O'Brien, Pres., 11 Pine St., New York.
 Ross, M. E., Avon.
 Rowley, C. Lynn, 868 Spring St., Jamestown.
 Rowley, E. F., Kennedy.
 Royce, C. H., R. F. D., Ithaca.
 Royce, G. G., Gouverneur.
 Runyon, H. J., New York.
 Russell, C. T., Munnsville.
 Rutherford, T. F., Madrid.
 Ryder, Frank H., Cobleskill.

S

Sackett, C. E., Arcade Bldg., Utica.
 Sanford, R. J., 19 Chestnut St., Potsdam.
 Sanger, W. C., Sangerfield.
 Santee, E. M., 22 Groton Ave., Cortland.
 Santimore, J. D., Malone.
 Schimmel, Albert, Maspeth.
 Schlappi, J. F., Constableville.
 Scoville, J. V. H., New Hartford.
 Seaman, Elizabeth C., 2-6 Cliff St., New York.
 Sears, Frank, R. D. 6, Cortland.
 Seymour, Jas. H., New York.
 Shaver, S. C., Dept. of Agriculture, Albany.
 Shaw, Frank E., Dunkirk.
 Sherman, Ira E., Sidney.

Shields, T. J., R. D. 5, Malone.
 Sholes, C. E., Oswego.
 Sibley, F. L., Cuba.
 Sisson, Geo. W., Jr., Potsdam.
 Skaneateles Creamery Co., Skaneateles.
 Smead, C. D., Hector.
 Smith, Geo. A., Constableville.
 Smith, Geo. A., Geneva.
 Smith, H. B., Chateaugay.
 Smith, Jasper, Binghamton.
 Smith, John A., Oak Hill.
 Smith, J. L., Warsaw.
 Spink, L. D., Attica.
 Stern, Louis, W. 23d St., New York.
 Stevens, W., West Groton.
 Stewart, Guy, R. D. 5, Binghamton.
 Still, C. B., R. D. 2, Theresa.
 Sturgis, Russell, Empire State Dairy Co., Brooklyn.

T

Taber Pump Co., Buffalo.
 Thatcher Mfg. Co., Elmira.
 Thornton, Amasa, New York.
 Ticknor, A. N., Penelope.
 Tiquin, Thos. E., Dept. of Agriculture, Albany.
 Troy, H. C., Ithaca.
 Truax, Melville, Pope Mills.
 Truesdelle, E. H., 1124 Gotham St., Watertown.

U

Urner, F. G., 173 Chambers St., New York.

V

Van Alstyne, Edward, Kinderhook.
 Van Slyke, Dr. L. L., Geneva.
 Van Wagenen, Jared, Jr., Lawyersville.

W

Wager, Irving A., North Brookfield.
 Wakefield, C. B., Falconer.
 Ward, Gilbert E., Ravena.
 Ware, T. M., Meridale.
 Warsaw Salt Co., Warsaw.
 Waterman, C. H., Avon.
 Weber, A. N., Springville.
 Wells, Geo. N., R. D. 1, Elmira.
 Wentworth, Fay, Sun.
 Wheeler, Chas. A., Deposit.
 White, P. E., Deer River.
 Whitney, W. B., Miller St., Sherman.
 Wickham, Chas. W., Mattituck.
 Wickwire, C. H., Cortland.
 Widmer, O. R., Wappingers Falls.
 Wightman, I. C., Norwich.
 Wilcox, M. S., Jefferson.
 Willey, E. B., Binghamton.
 Wilson, Dr. Claude, Watertown.
 Wing, Prof. H. H., Ithaca.

Winters, Harry B., Dept. of Agriculture, Albany.
 Witter, D. P., Berkshire.
 Wood, Geo. M., Woodville.
 Wood, Jas., Mt. Kisco.
 Wood, R. H., R. D. 3, Little Falls.
 Woodard, J. S., 367 High St., Lockport.
 Woodward, O. M., Rodman.

Woodworth, C. E., Southwest Oswego.
 Wright, C. B., Lisbon.

Y

Young, B. J., Hobart.
 Young, W. G., 315 Federal St., Rochester.
 Young, W. I., New York.
 Youngs, J. W., Oxford Depot.

LIFE MEMBERS WHO RESIDE OUT OF THE STATE

A

Adams, Cushing, Bellows Falls, Vt.
 Anderson, Leroy, Berkeley, Cal.

B

Bennett, A. A., St. Charles, Ill.
 Boynton, J. E., Portland, Ore.

D

Dewey Bros., Blanchester, Ohio.

E

Edmunds, F. W., Greeley, Neb.

G

Gill, Bion, ———.

H

Harding, H. A., Urbana, Ill.

K

Kelsey, J. W., Philadelphia, Pa.
 Knight, C. C., 154 Lake St., Chicago, Ill.

M

Monrad, J. H., Nearum, Denmark.

N

New Way Motor Co., Lansing, Mich.

P

Pearson, Dr. R. A., Ames, Iowa.

R

Richardson, E. A., Burlington, Vt.
 Roberts, I. P., 731 Cameron Ave., Fresno, Cal.
 Rogers, W. A., 304 Ohio Bldg., Akron, Ohio.

S

Smith, Wm. E., Plainfield, N. J.

T

Trout, A. K., Philadelphia, Pa.

W

Ward, A. R., Berkeley, Cal.
 White, W. I., Boston, Mass.
 Wilbur, D. F., Am. Consul, Kobe, Japan.
 Woodworth, E. B., Chicago, Ill.

STATE OF NEW YORK
DEPARTMENT OF AGRICULTURE
CHARLES S. WILSON, Commissioner

Bulletin 94

PROCEEDINGS

OF THE

ANNUAL MEETING

OF THE

New York State Breeders' Association

HELD AT SYRACUSE, NEW YORK

JANUARY 8, 9, and 10, 1917

CONTENTS

	PAGE
Officers	807
First Session	809
Appointment of Committees	809
Relation of Agricultural Education to Our Public Schools, Chan- cellor James R. Day.....	809
Second Session	811
Business Meeting, Treasurer's Report	811
Sheep on Eastern Farms, Dr. Sargent F. Snow.....	812
Breeding for Individuality and Production, F. G. Benham.....	816
New York Agricultural Experiment Station Plan of Breeding for Individuality and Production, Discussion Led by George A. Smith.	820
The Milk Question, R. D. Cooper.....	823
Third Session	824
What the New York State Breeders' Association and the Department of Agriculture Can Do Working Together, Charles S. Wilson.....	824
Control of Tuberculosis and Infectious Abortion, Veranus A. Moore.	827
Fourth Session	836
Business Meeting	836
Election of Officers	836
Resolutions	837
New York's Situation in Draft-Horse Production, Wayne Dinsmore.	839
Value of a Nitrogenous Supplement for Garbage-Fed Pigs, R. W. Duck	849
Foot-and-Mouth Disease, Dr. U. G. Houck.....	853
Swine Husbandry in Relation to New York State Farmers, K. J. Seulke	863
Meetings of Affiliated Societies.....	871

NEW YORK STATE BREEDERS' ASSOCIATION

OFFICERS, 1917

<i>President</i>	H. B. HARPENDING.....	Dundee
<i>Vice-President</i>	ELWOOD S. AKIN.....	Syracuse
<i>Secretary</i>	ALBERT E. BROWN.....	Syracuse
<i>Treasurer</i>	WING R. SMITH.....	Syracuse

DIRECTORS

Term expires 1918.

H. H. WING, Ithaca
GEORGE A. SMITH, Geneva
HARRY B. WINTERS, Albany
HARRY S. GAIL, E. Aurora

Term expires 1919.

E. A. POWELL, Syracuse
F. G. BENHAM, Canandaigua
C. P. MILLER, Byron
H. L. WARDWELL, Springfield

Term expires 1920.

CALVIN J. HUSON, Dresden
WM. G. MARKHAM, Avon
GEO. W. SISSON, JR., Potsdam
JOHN R. CLANCY, Syracuse

FIRST SESSION

MONDAY EVENING, JANUARY 8

Meeting called to order at 8 P. M., by President Frederick W. Sessions.

The president introduced Mayor Walter R. Stone of Syracuse who welcomed the members of the New York State Breeders' Association to Syracuse.

The following committees were appointed by the president:

Resolutions, Calvin J. Huson, E. A. Powell, H. L. Wardwell.

Legislative, H. L. Wardwell, G. W. Sisson, jr., E. S. Akin;

Nominating, A. L. Brockway, W. S. Hutchings, C. O. Gould, J. Leslie Craig, A. W. Lawrence;

Auditing, Harry B. Winters, H. S. Gail.

RELATION OF AGRICULTURAL EDUCATION TO OUR PUBLIC SCHOOLS

CHANCELLOR JAMES R. DAY, SYRACUSE UNIVERSITY

The country boy has a perfect right to agricultural education. He has the first right to it; but the city boy will be immensely helped by a little education in the things of the farm. There is nothing in the world which has so great claim upon education as agriculture, for there is nothing in all the world so widely and so intimately related to the public.

The boy on the farm ought to have the same chance to learn his own profession, to learn the science and philosophy of it, as the men of other professions know their work. The work of the farm supplies the opportunity for the most direct and "the most intimate touch with the Almighty," and for that reason it would be well not only for the farm boy to know more thoroughly the philosophy of the life he is to lead, but for the city boy to know the true worth and dignity of farm life.

Farming is no longer a haphazard thing. In the olden days when the fertility of the soil was so wonderful that great, bumper crops were inevitable even with the slightest encouragement from the farmer, the methods of science and mechanics were not necessary. But this condition no longer exists. This is a day when you have to hitch up your farm with the public schools. Farms

must be operated now in accordance with tested principles of science.

In the past there seems to have been a general prejudice against everything that bore the label "scientific," and to be sure much of it was justified. There is a great deal of tomfoolery passing under the name of science. On the other hand, we farmers have the right to say to the great Empire State of New York and its school system, "You must give our girls and boys a chance to study the proper methods of fertilization, seed selection, protection of crops and utilization of machinery that can help them in operating the farms of the future." There is no people on the earth who can more justly assert a right to a place in the public schools.

To me it is a source of satisfaction to note the growth of group consciousness among farmers. Their recent united stand for a greater share of the profits on their products is to be commended. I know personally I would gladly pay a larger price for my milk and other farm products if I could be sure that the bulk of the profit went to the farmer rather than the middlemen.

I am glad, therefore, to see the farmer moving into his inheritance. The intellect of the farmer ought to wake up to some kind of intelligent force to get the price for the goods he delivers. I want to see this great sub-stratum, this mighty foundation layer on which the Nation is builded, firm, happy and contented.

SECOND SESSION

TUESDAY MORNING, JANUARY 9

Meeting called to order by President Sessions at 10 A. M.

The secretary submitted his report, specially calling attention to the fact that efforts should be made to secure a larger membership.

The treasurer, Wing R. Smith, submitted his annual financial report for the year 1916, as follows:

Receipts

	Cash on hand as per report of December 1, 1915	\$486 76
	Dues received during 1916.....	188 00
1916.	Exchange paid	10
January	1. Interest	9 66
July	1. Interest	10 08
1917.		
January	1. Interest	10 73
		<hr/>
		\$705 33
		<hr/> <hr/>

Disbursements

1915.		
December 28.	Kirtland & Wyckoff, book.....	\$1 20
1916.		
January	3. Franklin Press, paper and envelopes..	15 35
	6. Bastian Bros., badges.....	21 60
	7. Stamps	2 00
March	28. 1,300 stamped envelopes, printed....	30 00
April	3. Franklin Press, stationery.....	21 00
	10. G. D. Kirtland Co., index book.....	5 50
	11. Mrs. L. S. Bush, clerical services....	12 07
	29. Rental typewriter	3 00
May	4. Mrs. L. S. Bush, clerical services....	5 75
	19. Mrs. L. S. Bush, clerical services....	2 50
	Unpaid check	3 00

June	3. Mrs. L. S. Bush, clerical services.....	\$1 00
December 21.	F. S. Barlow, expenses to Rochester..	12 53
	26. A. E. Brown, salary as secretary.....	25 00
	W. R. Smith, salary as treasurer.....	25 00
	W. R. Smith, postage.....	65
		<hr/>
1917.		\$187 15
January	1. Cash on hand.....	518 18
		<hr/>
		\$705 33
		<hr/> <hr/>

THE PRESIDENT: The first address on the program is a paper by Dr. S. F. Snow, of Syracuse.

SHEEP ON EASTERN FARMS

DR. SARGENT F. SNOW, SYRACUSE UNIVERSITY

In taking up the subject, "Sheep on Eastern Farms," I shall not attempt to go into the question of comparative merits of breeds, nor percentages of profit, as compared with cattle, but will take the ground that sheep can be made to fill an important niche in our general scheme of farm development. On a hundred-acre farm, the cost of maintaining a ewe flock of twenty with their natural increase each season, will prove surprisingly small when they are handled correctly. With a proper arrangement of lanes and fields there should be practically no coarse food cost until the flock is put into winter quarters; in fact, a moderate-sized flock as a weed exterminator will pay for all its trouble. If sheep are turned into a field about to be plowed, they will have cleared the fence corners by the time it is harrowed; later in the season after the crop is harvested let them in again. A systematic shifting of this kind not only provides good food for the flock, but saves time with the scythe and helps solve one of our most vexatious problems.

A Utah ranchman, owner of 5,000 sheep, on a trip to my farm on Skaneateles Lake in October, expressed himself astounded and greatly surprised at the thousands of acres of good hillside pasture going to waste. There was not a sheep in sight and very

few cattle to be seen, in the whole twenty miles, where, with our physical advantages, hundreds should be a common sight.

Eastern farms lend themselves naturally and easily to the development of small flocks of sheep, and as a state-wide economic proposition such a development is certainly rational to encourage and greatly to be desired. That the revival of sheep raising in the eastern states will prove profitable for a number of years seems beyond a doubt.

Albert W. Elliott, of Jeremiah Williams & Co., Boston wool dealers, speaking of the "Wool Situation, Present and Future," before the American Association of Woolen and Worsted Manufacturers at their annual meeting in New York last month, made the following statement: "I believe high prices for wool have come to stay for a long time. I do not say that the present famine prices are to continue for the next ten years; I do believe, however, that prices during the next ten years will average very much higher than during the ten years preceding the war. To my mind the wool growers of the world are to receive profitable prices for their product for years to come.

"I look for a long period of comparatively high prices for both wool and mutton. During that period, and just as long as prices of wool are remunerative, I look to see an expanding and increasing sheep industry all over the world. It will probably be many years before the clip of the world will be as large as in 1913-1914, but the increase will be gradual and will be slow."

Mr. Elliott finds that in the whole world, before the war started, there were only about nineteen sheep to every thousand acres of land, and that these nineteen sheep produced about eighty-five pounds of wool. At a rough estimate there is about one sheep to every fifty acres of land, and that one sheep produces something less than four and one-half pounds of wool.

He found further that, considering its possibilities, North America makes a very poor showing, producing a trifle less than one ounce of wool per acre as against one and three-fourths ounces to the acre in South America, five and one-third ounces per acre in Europe, and over five and one-half ounces per acre in Australia.

We all know that since the war the United States and Great

Britain have used enormously increased quantities of wool, and many productive ewes have been slaughtered for food, so that it would seem that Mr. Elliott's prognosis was well founded, that the price of wool will remain at a good level and perhaps lamb chops will soon join the egg aristocracy.

"Tariff tinkering" and the using of wool as a "football of politics" fortunately are things of the past and prices in the future will be controlled by supply and demand.

Western sheep raisers are alive to the situation and are stirring themselves to improve their flocks. The prices of from one hundred to one thousand dollars paid for pure breds at the recent ram sale held at Salt Lake City, and the flood of inquiries that have come in to establish breeders for next year's shipment prove that breeders here who are equipped with registered stock are to reap a good harvest.

Two ram sales are to be held the coming year, one further east, perhaps at Cincinnati, for the people of the South are becoming greatly interested and want pure-bred sires to improve their average of wool and mutton. It seems to the speaker that the taking up of the question of sheep by the New York State Breeders' Association is timely and well planned. One sheep to fifty acres of land, based on a world-before-the-war estimate, much larger now after two and one-half years of devastating struggle, is manifestly too few to supply the increasing demands of civilization.

With North America producing less than one ounce of wool to the acre, while Europe has shown she can produce five ounces and Australia over five and one-half ounces, no one will gainsay the deduction that we should wake up. Instead of producing one ounce of wool to the acre, we should produce at least three ounces, and every sheep should be bred to produce seven or eight pounds to the fleece instead of less than five pounds.

Mr. Elliott finds that "if we had only half as many sheep per square mile as Great Britain, we would be independent of the world as far as our wool supply was concerned and have three-quarters of a billion pounds of wool to export."

South America with her great handicaps and comparatively small population produces nearly twice the amount of wool we do now, and is energetically searching our markets for pure-bred

rams. Every sign indicates that our abandoned or semi-abandoned farms should be utilized to produce a larger supply of wool and mutton, and that the returns on such investments would be large.

The many details surrounding the development and registry of pure breds naturally prevent western ranch owners from supplying their own needs in that direction, but the smaller farms of the East, under capable and careful management, can supply this market with good profit.

Personally, I could have sold five hundred head of registered stock this year, at an average price of \$35 per head for mature rams and breeding ewes; if I could have supplied them in carload lots, I could have disposed from three hundred to five hundred at \$25 per head, each year since 1908.

A recent sale of a ram lamb at \$100 and four yearling ewes at \$50 each, to a Detroit manufacturer, together with a sale of three mature rams for \$265 to a ranch owner of Idaho, shows something of the returns from Snowcraft Farms, and only strengthens my belief that the raising of pure-bred sheep generally, here in New York State, can be made very attractive and profitable.

The question as to whether grades or pure-breds, or particular breeds or types are chosen, I shall leave for individual tastes or the conditions surrounding each farming venture, but under either or any circumstances a pure-bred ram that typifies the breed should head the flock, so that each successive year's lamb crop will show a higher standard.

There are drawbacks in sheep raising, as in all other lines of effort. Care and watchfulness must be observed or the best of flocks will deteriorate. You cannot make a sheep thrifty or profitable if it is loaded with ticks or worms, but such pests can be handled by dipping and keeping the ewes, with lambs by their sides, away from short pastures. While such problems are fairly easy, they must nevertheless be attended to or internal parasites will prove a Waterloo.

A most disturbing drawback, however, is the one furnished by the marauding dog. This drawback is so inexcusable that one wonders why a law so palpably poor and inadequate as ours should still be in force on the statute books. Of his own initiative a

pure-bred dog will practically never chase a flock of sheep. It is the roaming mongrel, usually kept by some non-tax-paying, careless citizen, that starts the mischief. A Federal law should class him as a dangerous animal and put a price on his head if found at large after nightfall.

It is to be hoped that our state legislature will pass, during the present session, a law that will protect the farmer against death and damage to his flocks. The economic value of adequate dog laws, in fostering the upbuilding of an industry that furnishes us both food and clothing, is so great in comparison with the small amount of trouble and expense required of the owner of pedigreed canines, that those vested with the power and responsibility of the law-making of our great commonwealth, I trust, will not long hesitate to give us sheep men this protection and encouragement.

I am told that the laws governing fences are not uniform throughout the state, that in some counties a seven-strand barbed wire fence complies with the law and in others rather despotic powers are vested in the fence viewers. This means merely more statutory defects to be adjusted, and the pressure to bring about satisfactory adjustments must come from such organized bodies as are convened here to-day.

THE PRESIDENT: Mr. F. G. Benham who was to favor us with an address this morning is necessarily detained at home by sickness, but he has forwarded a paper which will be read by the secretary.

BREEDING FOR INDIVIDUALITY AND PRODUCTION

F. G. BENHAM, CANANDAIGUA, NEW YORK

The proper method of breeding pure-bred dairy cattle is one of the important parts of business. What we would all be pleased to have would be an animal combining the highest possible production along with the best show type.

Up until a few years ago, and until some time after the pure-bred dairy cattle clubs had commenced to publish weekly, monthly, and yearly milk and butter-fat production records, the tendency was toward the show animal. The importer, the producer, and the buyer favored the show animal, and show-ring performances figured very prominently in the pedigrees of the

highest-priced dairy cattle. The importer eagerly sought those families that were the most prominent show-ring prize-winners, and the majority of the buyers were willing to pay the highest prices for the most famous show-ring prize-winners and their progeny. After a time, however, and as the advance-register system of merit work of the dairy cattle clubs progressed and the ever increasing records were published and given to the public through our numerous dairy and agricultural publications, gradually the attention of the majority of those interested in dairy cattle became centered on production, until to-day the great majority of purchasers are inquiring for animals whose ancestors show the greatest average production records.

The get of bulls who have the greatest number of heavy-producing daughters are the most eagerly sought, and there are but very few buyers of dairy cattle to-day that are willing to give preference to the show animal as against the producer. The constantly increasing average production of pure-bred dairy cattle, as well as the increasing prices that are being paid for good-producing strains, would naturally lead us to believe that as a business proposition (and I think we can truly say that this must be considered purely from a business standpoint since the business of dairying is too great to admit of viewing it from any other standpoint), the heavy-producing lines of breeding are becoming more and more attractive. Looking back over the long lists of the heavy-producing animals as shown by the different club registers of records, we find that of the several leading classes of females there are very few of those class leaders that are of the extreme show type. Most of the best wouldn't really get a place in the show ring judged by the prevailing show-ring scales of points. While some of our show cows are good producers, they are not prominent among the class leaders as shown by the production records of the different clubs.

It seems that the important questions before us are: Can we breed so as to keep up our present ratio of increasing production, and at the same time produce a more uniform show type? If not, will it pay us to sacrifice any of our production for type, or would it be better to change our show-ring scale of points that they would more nearly conform to the lines of our best average producers?

When we talk about breeding for type or production, these are questions that we should consider very seriously. Again, going back over our production records and show-ring records, we find that many of our most prepotent bulls are not good show-ring animals. Bulls whose progeny have become famous as producers have often been slaughtered when quite young and before their progeny had developed. They were killed because they were not of the desirable show-ring type; while, on the other hand, some of the best of the show-ring bulls bred to good-producing females have neither production nor show type. These, gentlemen, are pertinent facts that we, as breeders, are called on to consider.

One of our prominent educators speaking on this same question once said that there were so many different ideas as to what constituted beauty that it was a difficult matter to define the standard; that beauty was largely as we saw it along different lines. In judging different animals we become accustomed to call them more beautiful as they more closely conform to the scale of points by which we judge them. The stronger and blockier the draft horse, the more beautiful it is considered. The blocky beef animal is also considered very beautiful. The more ungainly the English bull dog, the more beautiful he appears to the expert judge.

Now, if we find that we cannot combine our present idea of show-ring type and production without decreasing production, would it not be wise to modify our ideas of show-ring type? A grand old man from Wisconsin, who perhaps has done more to promote the dairy interests of this country than any other one man, and a man who has made a gallant and persistent fight for the pure-bred animal as against the scrub, has repeatedly suggested that we modify our show-ring judging rules. I refer to ex-Governor Hoard, of Wisconsin. You, of course, are all familiar with his life work and know what it has meant to the dairy interests of this country.

If we decide that as a business proposition it is desirable to breed for the best possible production, then we should give particular attention to such lines of breeding as have been getting the best average results and among those lines watch for the most prepotent animals. We find that there is frequently a wide difference in the get of full brothers or full sisters. If the young

progeny of the bull appear of good uniform dairy type, something better than the average, that bull should be retained until his daughters have been tried out for production; and if his progeny show the ability to increase the ratio of production, that bull should be retained as long as he is fit for service. It would seem that such bulls should be much more valuable than those younger ones whose daughters are as yet untried. It would seem that such proved bulls should be eagerly sought by the beginner — by those who are anxious to get started right. With such a bull at the head of a new herd there would be much greater element of certainty in the success of the enterprise. If we could select a young bull that would get good-producing daughters as easily as we could select the young females that will develop into good producers, the problem would be much simpler. The average good judge of dairy cattle as a rule gets very satisfactory results in his selection of females, but I think that most of the experienced breeders will bear me out in saying that does not apply to the males. Occasionally you get a cross that produces, one whose blood lines seem to be extremely strong and carry on much further and better than others, but my experience has been that the surest way to pick out a good bull is to pick one whose daughters have shown the ability to produce. Of course, we are all willing to admit that it is very desirable to select bulls from heavy-producing dams and from sires who have heavy-producing daughters, but we are not nearly as sure of selecting the bull that we want as we are in selecting the females.

If we are to breed for extreme production or extreme show type, whichever seems preferable, the problem, of course, is simplified. If we wish to combine the two, based on our present show-ring scale of points and the present average type of the best producers, the problem is complex. However, viewed from the average dairyman's standpoint as a paying business proposition, it would seem to me desirable to breed in such a manner as would tend to give us the best average production and if possible, in such a manner as would keep up our present ratio of increase in production. In trying to arrive at this, let us bear in mind that the proper selection of bulls is a very important factor in the business.

Continuing a little further along this line, I personally know of

instances where beginners have had opportunities to purchase proved bulls that were in good physical health, bulls that had shown their ability to get good producers, good dairy type; but instead, those buyers would buy a young untried bull who perhaps was out of an untried cow, practically the same line of breeding and at a much higher price. As dairying is to-day the breeding of pure-bred cattle is one of the most important lines of agricultural industry. I believe that as breeders of pure-bred stock we should all give this matter very mature consideration.

THE PRESIDENT: There is now an opportunity to discuss the subject of "Breeding for Individuality and Production," and I will ask Mr. E. A. Powell and Mr. George A. Smith to lead the discussion.

Mr. Powell spoke at length and discussed the above subject in an extremely interesting manner, bringing out many points of interest. Mr. Smith spoke as follows:

MR. SMITH: Your president has asked me to take part in the discussion of the subject of breeding for individuality and production. In Mr. Powell's treatment of the subject he has brought out the intimate relation that has existed in the past in the families of the great producers. To illustrate how this works out in the building up of a dairy, I have decided to give you a brief description of the plan followed in securing the Jersey herd at the New York Agricultural Experiment Station, Geneva. When I went there in 1898, the comparative test of several of the prominent dairy breeds had just been brought to a close. Those of you who were familiar with that work will remember that the results did not prove just what a good many people expected. About the only conclusion that can be drawn from the work at Geneva, and at other places along similar lines, is that it is the individual of the breed and not the special breed that will determine the dairyman's success in his business. With this experience as a guide most of the old experimental herd were disposed of. Only the best were kept, and others were purchased to make up the number we desired. In selecting these new animals the idea was to secure only those of the type the station wished to keep. In the animals purchased we were so unfortunate as to get one animal that had tuberculosis, and before the presence of the disease was discovered, it had spread to several animals standing near

the affected one in the stable. The infected animals were immediately separated from the sound ones and the Bang method of control was practiced to grow a sound herd from them. A full description of this method and its successful application is given in Bulletin 277, of the Geneva Station.

The selection of a sire was one of the most important steps if the work was to be a success. It was desired to build up a herd of cows that had size, and that, physically, were strong and vigorous. To do that we required a sire that not only had these characteristics individually, but one whose ancestors on both sides showed the same general make-up, thus indicating the necessary prepotency in transmitting the qualities we wished. The finding of a sire of this kind, with families back of him that combined production with size and vigor, required considerable searching among the Jersey breeders of the state. We finally found a young animal in the herd of Mr. George W. Sisson, jr., of Potsdam, that filled the requirements very well. His dam, King's Pet of St. Lambert No. 104739, was a large cow of marked dairy type and a good producer. The sire, Fancy Ethlells Pogis No. 30025, was an exceptionally good individual. He took the first prize at the New York State Fair in 1893. He was sired by Ida's Stoke Pogis who was out of Ida of St. Lambert. This gave us straight St. Lambert breeding. It also gave us size, vigor, and good production when crossed upon some of our best pure-bred stock. This was followed later by a purchase from Milo Olin, of Perry, of Blue Belle Prince No. 70075. His dam was Blue Belle Princess No. 157364, an imported cow. Her sire was Blue Boy, who was out of old Blue Belle, one of the noted cows of the Jersey breed. His sire was Oakland Nora 2nd Lad, of pure St. Lambert breeding. Blue Belle Prince nicked well with the get of the first sire, King's St. Lambert Fancy, and this cross gave us a higher fat test in the milk.

On the dam's side, several pure-bred cows were used earlier, but finally the choice settled on two cows and their progeny, namely, Dotshome Carey No. 176896 and Millie's Darling No. 87835, both of which were very straight St. Lambert breeding.

The natural expectation would be that, with all the care used in selecting the foundation, the progeny would be good. Nearly all of them were, but there was an occasional failure that was not

easy to explain. Taken as a whole, the results were very satisfactory. Dotshome Carey is still in the dairy in her seventeenth year. In the thirteen periods of lactation which she has completed she has given 78,644 pounds of milk containing 4,111 pounds butter fat. In 1914, she gave 8,001 pounds of milk testing 5.18 per cent fat, but since that time she has gradually decreased in quantity of milk produced. She has dropped four heifers, three of which were good producers. Her oldest heifer, Carey of the station, dropped five heifers, four of which proved good. The next, Carey Fancy, dropped four heifers, all good. D. H. Carey B. B. dropped one heifer, a very good one.

Millie Darling dropped three heifers, all of which were large producers. The oldest, Millie D. of the station, dropped three heifers, all of which were good. Millie of Geneva dropped eight heifers, six of which were good. Millie Fancy dropped five heifers, three of which were very good. I could continue this description, but it would be merely a repetition. I have given enough for you to see the method followed in building up the herd, and more details would not make it any clearer.

The question has been asked why we confined ourselves to one breed. The answer is that we did not have the room to keep the sires that would be required for more. It was tried but did not work out satisfactorily.

At the present time the herd is made up of fourteen Careys, eight Millies, two Hammonds (they are said to be full bloods, but we have no papers for them), one grade, Gertie. The following statement of the production of the cows that have finished their lactation period in the different years will show what we have been able to accomplish. The desirable male calves have been sold to farmers about the state. The surplus females have also been disposed of:

Name of cow	1914 milk	Fat per cent	1915 milk	Fat per cent	1916 milk	Fat per cent
Dotshome Carey	8,001	5.18	6,639	5.1	5,027	5.
Carey of S. B. B.	7,551	6.4	8,361	6.37	6,536	6.2
Carey of S. Fancy	7,619	6.08	8,481	6.03	7,855	6.04
Carey Fancy Queen	6,807	6.19	7,795	6.28	6,501	6.37
Carey S. B. B. Princess	5,639	5.88	6,162	5.97	6,235	5.66
Carey F. B. B. Princess	4,240	6.	5,312	6.75	6,315	5.92
Dotshome Carey B. B.	3,855	6.64	3,805	6.33	4,875	6.64
Carey Blue Belle	5,571	6.93	7,542	6.16	(Died milk fever)	
Oxford Carey F. B. B.	5,555	6.16	6,281	5.90	6,521	5.73
Oxford B. B. Carey			6,398	6.07	6,458	5.64
Oxford Carey B. B.	5,766	5.88	5,532	5.7	6,096	5.58
Oxford Carey S. B. B.	5,664	5.82	5,113	5.84	3,763	5.67
Millie Fancy	9,371	5.32	8,668	5.23	6,406	5.
Millie of Geneva	6,750	5.31	5,746	5.39	5,439	5.73

Name of cow	1914 milk	Fat per cent	1915 milk	Fat per cent	1916 milk	Fat per cent
Millie D. of S. B. B. No. 1....	7,252	6.3	6,884	6.29	7,158	6.10
Millie D. of S. B. B. No. 2....	7,192	5.85	8,110	5.79	8,043	6.04
Millie G. B. B.....	5,603	6.81	6,521	6.66	5,533	6.96
Millie F. B. B. Lady.....	5,558	6.	6,624	5.7	7,184	5.83
Oxford Millie D. B. B.....	5,550	6.24	6,313	6.07	5,733	6.05
Millie F. B. B.....	5,896	6.3	8,035	5.93	7,421	5.92
Hammond F. No. 1.....	8,070	5.43	8,365	5.15	11,534	5.21
Hammond F. No. 2.....	8,021	5.46	8,183	5.43	7,486	4.95
Gertie's F. No. 1 B. B.....	7,844	6.29	7,922	6.44	6,691	6.57
Average for year, pounds.	<u>6,517</u>	<u>3.87</u>	<u>6,904</u>	<u>4.09</u>	<u>6,609</u>	<u>3.83</u>

THE MILK QUESTION

PRESIDENT R. D. COOPER, OF THE DAIRYMEN'S LEAGUE

President Cooper told of the struggles of the Dairymen's League for better milk prices and showed that New York City was then facing a shortage of two thousand cans a day as compared with the year previous. "The milk prices must go from 20 to 30 cents a hundred pounds higher," he declared. He made a strong plea for the organization of farmer-owned milk shipping stations in order to obtain control of production.

"There are now 558 branches of the league," he said, "31,000 members, and a control of over 400,000 cows. There is legislation in view at Albany which will establish the legality of the league beyond question." He asked the support of every dairyman to that measure.

"New York city is facing a great milk shortage brought on because farmers have left dairying as unprofitable. The city had better realize it and had better pay more for milk or in five years the price will be doubled.

"Farmers are earning on an average ten cents an hour. The services of their families are required in farm work, and there is not the same opportunity for education. Eighty-six per cent of the farms in Delaware County are run with the aid of women and children. We thought we were fixing the price high last September, but we have discovered it has not been placed nearly high enough."

President Sessions next introduced Mr. C. L. Burlingham, former Field Marshal of the United States Department of Agriculture, who made an address on the subject of "Cow Testing and Cow-testing Associations." Mr. Burlingham gave an interesting talk, pointing out clearly the great value of such associations to those so engaged.

THIRD SESSION**TUESDAY AFTERNOON, JANUARY 9****Meeting called to order at 2 p. m. by President Sessions****WHAT THE NEW YORK STATE BREEDERS' ASSOCIATION AND THE
DEPARTMENT OF AGRICULTURE CAN DO WORKING TOGETHER****COMMISSIONER CHARLES S. WILSON, ALBANY**

Several weeks ago, when the program was planned by your president, I was asked to discuss the topic, "Relation of the Breeders' Association to Our Fairs." Without giving the topic a second thought, I suggested to your President to make the subject broader, which he very courteously did. After I began to work on the thoughts to be presented at this meeting, and after considering the broader point of view, I came back to the original proposition and have decided to focus my thought, in the main, on the topic first presented. The feeling is what very many of us experience who seek after some object in which there may be a selection. Often we hesitate at the first product and then, thinking that others will be more perfect, we search, only to return to our first find.

Connected as I have been for the last two years with the State Fair, and as Commissioner of Agriculture with the county fairs, in that he apportions the state money distributed to each, I have given considerable attention to the conduct of the premiums and the attractions at these exhibits. We recognize their importance; we encourage them by our general attitude (by "we" I mean citizens and farmers of the state of New York), but a careful analysis of the purposes and aims of these organizations or institutions leads me to the conclusion that our leaders, our producers, can and should cooperate more closely than they do, and that that cooperation not only assists these associations to accomplish their purpose, but also redounds in a marked degree to the credit and, indirectly, the income of the producer.

At the meeting of the New York State Dairymen a short time ago I expressed the thought that our farmers ought to advertise their products more than they do. I was led to express this thought, or as I stated at this meeting, "to preach this sermon,"

because of the apparent lack of interest taken by our farmers in the National Dairy Show at Springfield.

While the main idea of what I want to express this afternoon is centered around mutual helpfulness of fairs and the Breeders' Association, it is flavored with the idea of publicity or advertising, not only from the local standpoint but also from a state or national point of view.

Is it possible for the Breeders' Association, in closer cooperation with the county fairs, to be of material help to produce mutual benefits? To recall for a moment the present practice (and I think we are all familiar with it, so that we need not mention it except briefly), we understand that these fair associations are offering as attractive prizes as they can. We know that they do not receive the support that is available. Sometimes the fair is criticised for the professional exhibitor or rounder. They have to contend with the problems of disease.

Is it not possible, however, for our state, county and local agricultural societies, by closer cooperation, to lend them material assistance and at the same time reap a personal or society benefit? There are three or four thoughts in connection with the work of the Breeders' Association with these fairs that I wish to emphasize. First, local owners often underestimate the value of their own stock, and remark at a county fair, "I have better stock at home." The thought I want to emphasize is this: encourage that owner to exhibit. The fair association (if the premium list does not do so now) will be glad to modify its prizes to meet this request. This effort, fostered by the fair associations, encouraged by local owners, has surprised both the fair and the owners as to the wealth or resources of their own community. I recall a definite example at a fair in southern New York. It was during the foot-and-mouth disease epidemic, and the fair officials were desperate almost as to how to secure a cattle exhibit without discredit. The local-talent development idea was encouraged, with a result that that fall saw the largest and finest cattle exhibit that had ever been held at that fair before. It was a revelation at that association. And what was possible in this community may be possible, if not is possible, in other communities where the agricultural industries are similar.

There seems to be a fear on the part of the amateur, as we shall call him, of the so-called professional or rounder, or the man who makes the circuit in the fall of several fairs. The circuit man prepares with considerable care, during the year, his exhibits, because it is a source of income to him; whereas for the amateur, the prize is more of a source of local pride. Whether a Breeders' Association should discourage the so-called rounder is a question to consider, but I volunteer this information from the records of our county fair statistics, that show you how much money some of these professional exhibitors pocket each fall from the \$250,000 appropriated by the state for the encouragement of agricultural production, and I further raise the question as to whether moneys given in premiums to these professional men comply with the spirit of the law which provides for this \$250,000 each year.

Local products, properly encouraged, will add to the attractiveness of our fairs, and in a measure eliminate the unrest which may exist because of the presence of these so-called professional exhibitors.

Our Breeders' Association can accomplish something by hearty cooperation with our fair associations.

Secondly, the local breeder or producer who thus exhibits will, by that exhibit, benefit himself. Let us assume that the best breeders in the county exhibit their products at these county fairs. They are really neighbors and exhibiting in friendly competition. They meet for a few days; they compare each other's products; they discuss this point and that point, and everyone goes home with a new idea for himself which unconsciously he weaves into his own herd or flock. This spirit of local publicity starts and, under normal conditions, develops, until there is a desire on the part of the county exhibitors, let us say, to show their products at the State Fair or at a national exposition.

Thirdly, our county fairs or our county organizations (farm bureaus or otherwise) will, if properly encouraged, act as feeders for our State Fair. The state of New York has a State Fair of which we are proud, but the state of New York has the capacity of developing the greatest State Fair in this country, and that can only be done when the heartiest cooperation and assistance come

from the producers in rural localities. The State Fair already has encouraged county fruit exhibits, county cattle exhibits, county farm bureau exhibits, and the State Fair is willing further to encourage these exhibits.

The next address on the program was a most interesting and instructive talk by Professor H. H. Wing, of Cornell.

W. E. Skinner, of the National Dairy Council, then gave an excellent extemporaneous talk on the subject of "Publicity and Marketing of Milk and Dairy Products."

THE PRESIDENT: Next on the program is a paper by Dr. Moore, who is always ready and willing to address the members of our association.

CONTROL OF TUBERCULOSIS AND INFECTIOUS ABORTION

DEAN VERANUS A. MOORE, CORNELL UNIVERSITY

I was requested by your secretary to discuss the subject of bovine tuberculosis and infectious abortion in cattle with reference to their control. The task is difficult because in this country these two diseases are the two great scourges of the bovine species. More than this, you are already familiar with the various methods that have been proposed or introduced for the eradication of tuberculosis. As yet, the control of infectious abortion has not been undertaken in an official manner. It is, however, a plague which stands second to none in its devastation of dairy cattle. In the brief time at my disposal, I desire to discuss the subject on the basis of the nature of the diseases themselves, which I believe is the only foundation upon which to build the superstructure of control.

If we read the history of the infectious diseases that have been brought under subjection, we will find that success was obtained by conforming preventive measures to definite knowledge concerning one or more of the essential elements in the spread of an infectious disease, namely: (1) the life history of the specific organism, (2) its elimination and spread from the infected individuals, (3) the detection of the active and potential spreaders, (4) the channels through which the healthy become infected, and (5) the protection of the well against the possible diseased.

It is only by observing these facts that any permanent success has ever been obtained in eradicating infection. I do not care to emphasize the oft repeated, yet frequently denied statement, that "history repeats itself," but I am of the firm conviction that, in trying to control these two great scourges of cattle, there is more hope of success if we follow sanitary principles that have already proved to be efficient in the eradication of other specific maladies than by any other procedure.

First, let us consider tuberculosis. This disease has an interesting history, extending back more than forty centuries, but the essential facts that need to be considered here are few. They are as follows: In 1865, fifty-one years ago, Villiman demonstrated that tuberculosis was infectious. In 1882, or thirty-four years ago, Koch discovered its specific cause. He then thought that the tubercle bacteria affecting all species of mammals were identical. In 1898, Theobald Smith pointed out the difference between the human and bovine tubercle bacteria and, in 1901, Koch confirmed this conclusion. The results of their work pointed out very clearly that bovine tuberculosis is a disease of cattle and must be treated as such, although it is of sanitary importance because of the susceptibility of young children to its virus.

In 1890, Koch found that when the protein of tubercle bacteria (tuberculin) was injected into animals infected with tuberculosis they would give a definite reaction. With the belief that human tuberculosis was largely due to that disease in cattle, there was a vigorous attempt made in this country to eradicate it by means of the use of tuberculin and the destruction of animals that reacted to it. That method is still followed, and in this state it is the official procedure for the control of the disease. In 1916, there were between 2 and 3 per cent of the cattle of the state tested and thereby brought under official supervision, but the remaining 97 per cent were handled at will. During the last twenty years the state has paid upwards of \$1,000,000 indemnity for reacting animals, and to-day it is doubtful whether there are many herds that can present a health certificate of freedom from tuberculosis as a result of this expenditure. The essential reasons for this are that the process of testing and slaughter was so rapid that the owner learned little or nothing about the disease for future guidance, infected animals that did not react in the herd

were left, and the disease was subsequently introduced through infected milk fed to calves or diseased cattle. The purpose of the law was right, but the ideals of its framers have not been realized, because it was not acceptable to the cattle owners and without their cooperation it is not possible for any law to check the natural spread of tubercle bacteria.

There seems to be a common impression that sound herds cannot be maintained as such and that tuberculosis cannot be eliminated from the infected ones. There also seems to be a feeling that there is something mysterious about this malady that defies the knowledge and power of man to overcome. The truth of the matter is simple. The disease is specific in that it is due to a single cause. The channels of infection are clearly understood and the course the disease may take in the body and the time in its development that the virus is eliminated from the infected individuals are equally well known. With this knowledge why should there be tuberculosis in any herd in New York State?

With such knowledge of Texas fever, that disease is being rapidly brought under perfect control. With a like knowledge of malarial fever in man, malaria has largely disappeared from this country. With even less knowledge of yellow fever than we possess of tuberculosis that plague was permanently eliminated from our shores. With the diseases mentioned, and with others that could be named, knowledge concerning their cause and means of dissemination was first sought and found and then applied with the startling result that the diseases disappeared.

With tuberculosis, this knowledge which has slowly been acquired through research has not been so effectively applied. On the contrary, those most energetic in striving for mastery over it have sought relief through the enactment of laws to control it, but in so doing, they have left the common channels through which tubercle bacteria pass from tuberculous animals to healthy ones but slightly, if at all, disturbed, and the succession of new hosts for the specific organism has remained practically unbroken. The reasons for this are numerous, but the most important one, I believe, is a general lack of definite knowledge concerning the various phases in the symptom-complex of tuberculosis and an understanding of its great economic significance.

The control of tuberculosis differs from that of many diseases because it is slow in its development, usually chronic in its course, often difficult to diagnose, and now widespread in its distribution.*

It is because of these factors in the nature of tuberculosis that an official method of control, that does not apply to all herds, that is rapid in its execution, and that works hardship to those who come under its jurisdiction, cannot succeed generally. The American practice of attempting to purify annually one or two per cent of the herds by a rapid procedure that leaves the owner bewildered, not educated, and allowing the others to remain untouched, to harbor and spread the disease as they may, is doing very little to eliminate tuberculosis from the cattle or to safeguard the public. The problem is further complicated by the findings of careful research, confirmed by practical experience, that the methods now known and employed for diagnosing or detecting tuberculous cattle are not fully reliable when negative results are obtained. This fact has allowed diseased animals, and often spreaders, to remain in a herd to later infect those that were sound at the time, or to be shipped into other localities under a false security to work irreparable damage and to bring reproach upon the herds from which they came.

From the facts as they are, concerning the nature of tuberculosis itself, the present laws for its control and the knowledge

* In 1908 data were gathered from veterinarians who had tested animals during the year 1907 with tuberculin furnished by the New York State Veterinary College and also the data from the tests made by the Department of Agriculture for the years 1904 to 1906. The results were as follows:

Private tests.—There were tested 421 herds containing 9,633 animals. One or more animals reacted in 302 herds and a total of 3,432 animals reacted. They were distributed in 39 counties.

Official tests.—The State Department of Agriculture furnished data on 262 herds that had been tested by the Department with a total of 3,088 animals. One or more animals reacted in 121 herds and a total of 673 animals reacted.

Comparing the official data for the two periods we find that in 1904 to 1905, 21.7 per cent of the 3,088 cattle tested reacted, and that in the year 1913-14, 11.6 per cent of 18,284 animals reacted.

Comparing the reports of private examinations we find that in 1907, 35.7 per cent of 9,633 cattle reacted, and that in 1913-14, 3.7 per cent of 23,815 animals privately tested and reported to the Commissioner of Agriculture reacted.

Thirty-one veterinarians report to the committee a total of 16,320 cattle tested in 1913-14 with 2,786 reactors, or 17 per cent.

It is interesting to note that in 19 herds containing a total of 690 cows that have been under careful physical examination for the past few years, and in which all suspected cases were promptly removed, a tuberculin test showed but 24 reactors or 3.4 per cent. In six of the nineteen herds there were no reactors at all.

In the certified herds of one city, totaling about 2,300 animals, the percentage of reactors on the annual tests have been reduced from 31 per cent, found on the first test in 1904-5, to less than 1 per cent in 1913-14.—Report of the Commission for the Investigation of Bovine Tuberculosis, Albany, N. Y., 1915.

and attitude of the dairymen generally toward both the disease and the law, I can see little to encourage those who wish, by this method, to free our cattle from this scourge. If I did not possess an unswerving faith in the value of knowledge in the solution of difficult problems and belief in the inherent desire of man to deal honestly with himself and justly with his neighbor, I should be pessimistic regarding the control of bovine tuberculosis. When a ship at sea is tossed by the storm and turned in the opposite direction of its course, however, the pilot waits until the wind slackens and then, with the aid of his compass, heads his vessel toward the harbor. In trying to eradicate bovine tuberculosis we have been tossed about by partially informed but well-intended enthusiasts and sanitarians, primarily interested in protecting the human family and making things look comfortable for the cow, until we have almost lost our bearings in respect to the relation of the disease itself to the methods employed. Nevertheless, the time seems to have come when it is possible to apply the knowledge of the disease as the mariner does his compass and guide tuberculosis out of our herds. It cannot be accomplished at once, but if we accept and follow the lesson taught by the life history of the disease and protect the healthy cattle against all sources of infection, it will necessarily disappear.

It is encouraging to recognize that already the two fundamental things necessary for the desired results, the possibility of which some people are inclined to question, have been accomplished by a few individuals. These are: (1) Herds have been grown up and maintained free from tuberculosis, and (2) herds that were infected with tuberculosis, have been freed from it, kept sound, and made to produce healthy progeny. It should be added that success was attained largely because of the interest of the owners to possess healthy cattle and to escape from the heavy losses occasioned by this disease.

In order to make these individual successes general, I wish to suggest a few requirements that seem to be necessary in a successful, state-wide campaign for its suppression.

1. It is essential that cattle owners generally have a more definite knowledge and a better understanding of the nature of tuberculosis and its economic significance. They should have

a keener personal interest in the health of their own cattle and be made to realize in many instances that the heavy annual toll because of disease can be saved.

2. It is essential that the various methods of economically handling an infected herd should be understood and that the owner should be allowed, without injury to others, to follow the method best adapted to his conditions.

3. The fact should be recognized that there are various methods for detecting tuberculosis in cattle and that in some cases each and all of them may fail. This emphasizes the fact that time, close observation, and repeated examinations may be necessary to detect an infected animal, even one which may be a spreader.

4. The limitations of the best methods of diagnosis render it necessary that healthy animals be protected against possible diseased ones that may be present in the herd and, for the time, have evaded detection.

5. The sanitary principle should be recognized and applied that in the disposal of infected cattle they should be headed toward the slaughterhouse where, under inspection, their beef value may be conserved.

6. Owners should be instructed in the principles of segregation and the danger of allowing cattle to infect one another through common feeding mangers and watering troughs. The new era in barn construction to facilitate feeding, watering, and care has wonderfully enhanced the opportunities for the spread of disease. Proper hygienic conditions are to conserve the health of the animals rather than the labor of caring for them.

7. Finally, the ban of public sentiment against the products of tuberculin-reacting cattle, which physically appear to be healthy, should be removed and placed upon the products of cattle that have open lesions and those that show, upon physical examination, evidence of tuberculosis.

It is neither just nor helpful in the present state of our knowledge to put unnecessary burdens upon those who are trying to eradicate tuberculosis from their herds. I am devoted to better public health and live-stock sanitation, but there is no more reason, other than sentiment, for rejecting the products of tuberculin-reacting cows that are, upon examination, found to be apparently

well and whose udders are sound, than there is for condemning grade B raw milk. Experiments have shown that milk from such cows is just as safe, in fact more so, than common market milk, which may come not only from infected cows but also from cases of open lesions and tuberculous udders. The public should realize that, if it is too severe, it will, as it has done in the past, defeat its own object. Even in the herds producing grade A and certified milk, tuberculin-reacting cows are frequently found. I pray for the time when all our cattle will be free from infection, but, until then, let us encourage rather than victimize the men who, to the best of their ability, are doing all they can to eliminate the disease and to protect the public. We do not want tuberculous-infected cattle at all, and we are trying to eliminate them from the dairy herds; but during the process, or until we have more accurate methods of detecting them, it does not seem wise to discourage those who desire or are trying to make things better.

The situation regarding the prevalence of tuberculosis in this state is such that it is calling for a progressive, state-wide campaign to control it. The essentials for such an endeavor are fundamentally educational. The task is to direct the attention of the cattle owners to this disease and its importance in such a way that they will adopt a safe and secure course to build up sound herds. The law should prohibit the selling of milk from obviously diseased cows or open cases of tuberculosis. With such a law as an introduction, the point of contact will be established between the owner and his veterinarian or those making the inspection.

I refer to veterinarians as the inspectors, because there is no other class of men qualified by virtue of their preparation in natural, physical, and medical sciences to give technical advice on this subject. It is the veterinarian only who can make the diagnosis and direct the proper course to be followed to protect the other animals in the herd. Whatever the sanitary laws may be, in the last analysis, it is the practicing veterinarian first consulted by the owner who largely determines the fate of the herd and possibly the health of many herds. He must not only look

after the sick and infected animals, but also, in many instances, become the sanitary teacher of their owners.

The veterinarian stands in relation to animal diseases as the physician to human maladies. For the same reason that we have health officers we should have district veterinarians or health officers for animals who in turn are responsible to the chief veterinarian of the state. If the millions of losses from disease annually occurring among the food-producing animals are to be saved there must be suitable veterinary organization and efficiency. With it, the chronic infectious diseases would gradually disappear. The method is simple, the difficulty is in the process of educating, training, and fitting veterinarians to do this work. Contrary to the views of those who wish elaborate and drastic laws on this subject, it is my opinion that we need but little regulatory legislation beyond authority and proper organization. We are dealing with a natural phenomenon and consequently the solution rests in the application of broad principles rather than in a single formulated plan of procedure. We are, however, sorely in need in this country of more and better facilities to prepare research men in animal diseases and practitioners of veterinary medicine in order to control this and other diseases.

France recognized this economic principle 154 years ago when she built and equipped the first veterinary college at Lyons. One of the strongest elements of preparedness in Germany was her large number of well-equipped veterinary colleges and efficient control over the diseases of animals. In Holland and Denmark, the veterinarians are rendering most efficient service because for many years these countries have been developing schools and training men in veterinary medicine and live-stock sanitary science. Not until this country adequately prepares men for this highly important service can we hope for the maximum good results.

Bovine tuberculosis is to be controlled by an intelligent series of actions directed against it by the owners of cattle and their professional advisers. The success will be in direct proportion to the interest of the owners, the efficiency of the veterinarian, and the freedom allowed him to follow the necessary course indicated by the disease in any given herd. All this can be done

without injury or injustice to others if a comprehensive, continuous system of education and control is established.

My subject included infectious abortion. This disease is not so well known as tuberculosis, and the indications are that much more research will have to be done before definite successful methods of control can be formulated. It is a chronic infection, and its control requires the same close observance and attention to conditions as tuberculosis. It has called for a technic that is new to American veterinarians and considerable time will be required to qualify men to use it.

Unfortunately this disorder like tuberculosis found our country unprepared, and consequently it had plenty of opportunity to become well established before it was attacked. It will eventually be brought under control but it is useless to say when until we know how long it will require to ascertain the knowledge necessary to prescribe a remedy or outline a method of prevention. This may or may not be promptly acquired. Dr. Williams is doing some very valuable work, and he feels that much relief will be obtained if the provisional method of prophylactic treatment, consisting of douches and disinfection, is carried out. We are doing all we can with the facilities we have, and the best we can offer is to promise untiring effort in the search for truth. These diseases are causing enormous losses, but they are temporary and eventually they will be brought under control.

FOURTH SESSION

WEDNESDAY MORNING, JANUARY 10

Meeting called to order at 9:30 A. M. by President Sessions.

PRESIDENT SESSIONS: The first order of business this morning is the hearing of reports of committees and the election of officers for the ensuing year.

We will first listen to the recommendations of the nominating committee. Is the nominating committee ready to report?

MR. W. S. HUTCHINGS: The committee appointed have carefully considered the question of officers for the ensuing year and beg to submit the following list of persons as officers for the coming year:

President, Harry B. Harpending of Dundee.

Vice-President, Elwood S. Akin of Syracuse.

Secretary, Albert E. Brown of Syracuse.

Treasurer, Wing R. Smith of Syracuse.

Directors for three years: Calvin J. Huson of Dresden, Wm. G. Markham of Avon, Geo. W. Sisson, jr. of Potsdam, John R. Clancy of Syracuse.

Signed,

A. L. BRÖCKWAY,

C. O. GOULD,

A. W. LAWRENCE,

J. LESLIE CRAIG,

W. S. HUTCHINGS,

Nominating Committee.

THE PRESIDENT: You have heard the report of the nominating committee. What is your pleasure?

MR. SMITH: I move the report be accepted and the persons named be elected as officers for the ensuing year. Motion seconded and adopted and the president declared the above persons duly elected.

MR. LAWRENCE: I move the election of C. P. Miller of Byron as director for two years in place of Mr. Akin who has been elected vice-president.

Motion seconded and carried, and Mr. Miller was declared elected as director for two years.

THE PRESIDENT: We will now listen to the report of the committee on resolutions.

Mr. Huson, as chairman of the resolutions committee, reported favorably the following resolutions and moved their adoption, the motion being seconded and carried after each resolution had been read:

WHEREAS, The presence of tuberculosis in many of the herds in this state is causing adverse criticism of the herds of this state by prospective buyers, and

WHEREAS, This state is suffering heavy losses, both directly and indirectly as the result of this disease, and

WHEREAS, The provisions of the present law are such that the breeder is not encouraged to test, and remains ignorant of the true condition of his herd, and

WHEREAS, The milk from tubercular herds containing tubercle bacilli is a menace to the public health; therefore be it

Resolved, That this New York State Breeders' Association urge the individual owners of cattle to take every possible means to eliminate the disease if they have it in their herds and to establish sound, accredited herds.

Resolved, That this association petition the legislature to consider favorably the proposed amendments to the present law, which have been determined upon in a conference called by Commissioner Wilson at Albany, December 20, 1916, having for its object the mandatory physical examination, a wider and more general use of tuberculin, the pasteurization of milk by-products, and establishing accredited herds.

Resolved, That we commend and pledge our support to all lawful efforts through organization or co-operation as will best tend to ensure to those engaged in agriculture, the same measure of return for the labor involved and capital invested, as those engaged in other occupations and pursuits.

WHEREAS, For many years there has been a decrease in the

number of sheep maintained in this state and in this country at large until this country is now dependent upon foreign supply for more than half of its six hundred million pounds of wool necessary annually for manufacturing purposes, and

WHEREAS, There are in this state several million acres of land adapted to sheep raising above any other purpose, and

WHEREAS, The principal reason for the decline in this industry is the damage wrought by predatory dogs; therefore be it

Resolved, That we urge the enactment of the proposed legislation for the protection of our flocks against the ravages of dogs.

Resolved, That we earnestly recommend that the Legislature make an appropriation for the erection of a Horse Building on the State Fair Grounds of the same general style as the present Cattle Building, for the proper stabling and exhibition of draft, farm, and breeding horses.

WHEREAS, The disease known as *Anthrax* is doing a large amount of damage to the bean-growing industry of this state; therefore be it

Resolved, That the appropriation of \$8,000 asked for of the coming Legislature be approved by the New York State Breeders' Association.

Resolved, That the thanks of this association be extended to Mayor Walter R. Stone of Syracuse, to the newspapers of the city of Syracuse for the accurate and full accounts published of our meeting, to the managers of the Onondaga Hotel, to the officers of this association, to the respective speakers, and to all other persons who have so ably assisted in making this annual meeting one of the most interesting and instructive ever held by our association.

THE PRESIDENT: We will now have the pleasure of hearing from Mr. Wayne Dinsmore on the subject of draft-horse breeding. Mr. Dinsmore is secretary of the Percheron Society of America and consented to come from Chicago to attend this meeting.

NEW YORK'S SITUATION IN DRAFT-HORSE PRODUCTION

**WAYNE DINSMORE, SECRETARY, PERCHERON SOCIETY OF
AMERICA**

Few of you realize that the horse industry is the most important single live-stock industry in your state. The value of horses and mules on the farms of New York amounts to more than \$80,000,000, while the combined valuation of all cattle, sheep, goats, and swine, on New York farms, only amounts to a little over \$93,000,000. When we take into consideration also the value of live stock not on farms, but in cities, towns, and villages in your state, we find that the total value of the horses in New York State, as reported by the 1910 Census, amounts to more than \$141,000,000, whereas the total valuation of all other classes of live stock within the state amounts to only \$96,000,000. I mention this merely to call your attention to the fact that we are dealing with the industry which represents the investment of more dollars than all your other live-stock industries combined.

It is interesting to note also that although New York State has more money invested in horses used in cities, towns, and villages than any other state in the United States, the production of horses in this state is very much below the average for the United States as a whole, for although, taking the entire United States into consideration, 16 per cent of all farms reported the presence of yearling colts in 1910, only $9\frac{1}{2}$ per cent of the farms in New York State reported the presence of any yearlings, indicating that the production of horses in this state is very much below the average in spite of the fact that you have the greatest call for horses for commercial purposes of any state in the Union, and more money invested in horses used for commercial purposes than any other state in the Union.

The very small proportion of horses being produced in this state is also shown by a perusal of the 1910 Census figures, which show that although you had at that time almost 600,000 head of horses, only 25,000 of these were yearling colts. In other words, the yearlings found in your state represented only a fraction over 4 per cent of the total number of horses, which affords us additional light on the very slight attention that is being given to horse production here.

WASTED OPPORTUNITIES

To an unbiased observer, acquainted with the fact that buyers of horses for commercial purposes are buying thousands upon thousands of horses in the West every year, at prices ranging from \$250 to \$300 a head, and then shipping them to New York and other large cities in your state, it appears that your farmers in New York State are overlooking an opportunity to so modify their farming operations as to make it possible to take advantage of this great market for commercial horses and thereby add to their farming operations a supplemental source of revenue that would amount to several hundred dollars annually for each farm, or millions in the aggregate to the farmers of your state.

WHY HAS THIS SOURCE OF REVENUE BEEN OVERLOOKED?

It is difficult to determine with accuracy why your farmers have overlooked such an important source of revenue on their farms when the greatest market for commercial horses that the world affords is at their doors. In my judgment there are a number of factors that have contributed to the existing conditions. One is found in the fact that the soils in a large proportion of your state are relatively light and easily worked, obviating in some degree the need for very heavy horses, which we have found most effective for farm use in the West.

Another factor of no slight consequence is that New York State was in a measure the cradle of the standard-bred breed, and thousands of horses of trotting blood were widely distributed over the state, used by farmers in their farm work, and the surplus sold at profitable prices during the balmy days when good driving horses were readily sold at profitable prices.

Still another factor is found in the fact that gang plows, 18-wheel discs and seeders, 7-foot binders, and other modern farm machines of large size, necessitating increased horse power, have not been so generally used here as in the Mississippi Valley, due to the small size of a larger number of your farms and the fact that much of your land is stony or stumpy and not adapted to the use of this modern farm machinery.

These influences combined have resulted in populating the

farms of New York with a preponderance of horses of light blood, which are adapted fairly well to your farm work as it is conducted, and which can readily be used for driving to town. The almost total elimination of the demand for driving horses within recent years, however, has eliminated your market for the surplus light horses produced, with the net result that your farmers have within recent years found no sale for their surplus animals and have consequently discontinued, in larger degree, the production of horses. When farmers find no satisfactory or profitable sale for surplus horses produced, the most natural thing is to quit breeding them, without considering whether a change in type and size would permit them to dispose of the surplus animals produced.

So far as I have been able to determine from observation, inquiry, and correspondence, these are the chief reasons underlying the lack of interest in horse production in this state. I believe that when your farmers understand the situation more fully, and realize that by the production of draft horses they can sell the surplus animals readily and profitably, horse production will again become a most important industry in this state.

ADVANTAGES OF USING DRAFT HORSES

The draft horse is primarily a utility horse. Mares are expected to work on the farm the year around whenever work is to be done, save for a short time just prior to and just after the colts are foaled. Stallions are expected, and under good management are required, to work in harness the year around, save during the breeding season.

Careful tests have proved that a horse can exert throughout an entire day's steady work a tractive pull of approximately one-eighth to one-tenth of his normal working weight. Thus, a horse weighing 1,600 pounds can be relied upon to exert a steady pull of from 160 to 200 pounds throughout a day's work. Under great stress a horse can exert a pull equivalent to one-half his weight, or even a little more but this extraordinary exertion can be continued for but a very short time. I may be able to make this a little plainer by calling your attention to men who, when pulling in a tug of war, can exert themselves to the limit of their strength for but a very short time. They must then rest before

returning to such extraordinary exertions. A man may carry on each of his shoulders a weight equivalent to his own body weight, but cannot long endure such a heavy burden. A weight which he has to carry all day without stops of consequence must be proportioned to his strength. The same thing holds true with horses in farm and field work. Five light horses, weighing 1,100 or 1,200 pounds may be hitched to a gang plow consisting of two 14-inch plows, and may pull such a plow for a time, even when turning a furrow eight inches deep, but cannot long endure such heavy draft. In actual practice, if such a team is required to exert a pull of such magnitude, it is necessary to stop and rest the horses frequently on account of their extreme exertions, and, in spite of anything that can be done, they will run down in condition if they are worked day after day.

Five powerful draft horses, weighing 1,600 to 1,700 pounds each, may be hitched to the same implement, plowing the same depth, and can be worked steadily by an intelligent teamster without ill effects.

Heavy modern machinery has revolutionized agricultural production in our best farming sections. We now expect and require a farm hand to plow five acres a day, and to turn off other field work in like proportion. The land is plowed deeper, the seed bed more perfectly prepared, and cultivation more thoroughly done. The use of more and heavier horses makes it possible to do your farm work more quickly and more thoroughly, to increase your crops, while at the same time reducing the cost, just as the introduction and use of extremely heavy locomotives on our railroads has made it possible for the railways to handle a much greater volume of traffic at materially reduced cost to the ton.

I do not know the cost of producing your principal farm crops in this state under your local conditions, but I do know that in Illinois we figure that it costs about \$14 an acre to raise corn when all the factors entering into the cost are taken into consideration. The man who raises but 40 bushels to the acre is making but a small profit even if it sells at 50 cents a bushel, but the man who, because of superior soil preparation and cultivation, raises 80 bushels to the acre without any greater cost in production than

his neighbor who raises 40 bushels to the acre, is reaping a handsome profit in his farm operations.

Our profit in producing farm crops or live stock comes from that margin over and above the expense of production. It is unfortunately true that on many farms the crop produced does little more than to pay for the actual labor and other costs involved in its production. It is equally true that many horses are produced and sold from our farms that do not yield a profit, when all of the cost elements entering into their production have been properly kept so as to make possible a true finding as to cost of production.

I do not believe that many of your farmers in this state are at the present moment prepared to embark on the breeding of pure-bred Percherons. The production and sale of Percherons, like the breeding of any other class of pure-bred live stock, is a business in itself, requiring superior judgment and business ability, particularly in the advertising and sale of the surplus. I am satisfied, however, that grade draft mares, especially grade Percheron mares, constitute the real key to efficiency in the farm operations on a large proportion of your New York farms. The use of these mares in four- or five-horse teams will make it possible for one man to do as much as two or three men can do with single plows and light teams, and the work will be better done. A larger yield to the acre will necessarily result from the more thorough preparation of your land and tillage of your crops so that in direct farm operations substantial gains in money are to be expected from the use of good grade Percheron mares.

Aside from this, the colts produced constitute a most important source of revenue on every farm where such mares are depended upon to do the work. You need not expect to raise a colt from every mare every year, for we find that in actual practice a man does well to raise four colts per annum from each six mares, as some of the mares are certain to miss getting in foal, or some colts will be lost. The dry mares, however, can be counted upon to work satisfactorily throughout the year. The mares with foals can also be counted on for regular services, save for a short time prior to, and just after foaling, when they should be allowed some rest.

A man who has done his farm work throughout the year with grade Percheron mares, and who has from four to six colts to sell annually, has in the colts an important source of revenue, the amount of which will be determined by the character of the mares used, by the kind of stallion used in service, and by his own ability in caring for and feeding the young animals up to sale time.

The production of horses weighing from 1,000 to 1,150 pounds, where the surplus animals must be sold at \$130 to \$150, offers no special inducement to a farmer who must keep an animal until he is five years of age for this price, but the production of draft horses, where the colts produced can pay their own way in work from the time they are two and a half years of age, and where the surplus animals produced will bring from \$250 to \$300 at five years of age, does offer a substantial supplemental source of revenue to every farmer as the fact that the animals pay for their own keep for half the time they are owned, and the fact that they are sold at a substantial profit over the cost of production is a practical consideration of consequence to the farmer who is seeking to make every division of his farm pay.

TYPE OF GRADE PERCHERONS TO SELECT FOR NEW YORK USE

It is unfortunately true that a large proportion of the grade draft horses that have been brought into New York State have been of inferior quality and type. It is also true that a great many of the pure-bred draft stallions that have been sold into this state are inferior in size, conformation, and quality. This is due largely to the fact that your farmers generally are not good judges of draft horses, and they have, in many instances, been led to believe that the animals presented to them for purchase were representative draft horses, whereas in truth and in fact they represented merely the culls from the draft-horse breeding sections of the West. The man who begins draft-horse production with inferior stock naturally cannot find a satisfactory market for the surplus when it is available for sale. He thereupon becomes disheartened and disgusted with draft-horse production and pronounces it a failure, when the difficulty lies in his own faulty judgment in the selection of the draft animals in the beginning.

Many undersized, crooked-legged, unsound, coarse and gummy-legged stallions have been disposed of in this state and a great many grade stallions have been disposed of under the representation that they were of pure breeding. The colts produced from such grade stallions were naturally of inferior character, and so many of your farmers have been imposed upon in these ways, that they have become thoroughly disgusted with draft-horse production in so far as they are acquainted with it.

The faults I have just mentioned are the very ones you must avoid if you are to be successful. The type of drafters that have done well elsewhere, and that will do well in this state, are, in mares, those that stand from sixteen one to sixteen three hands in height, that weigh from 1,500 to 1,850 pounds in good working condition, and that are deep-bodied, strong-backed, round-ribbed, with long level croup, that are heavily muscled throughout all parts, and that have as good a set of legs and as clean joints and as good quality as your good types of light horses. They should be clean cut in the head, with good length of neck, sloping shoulders, and good slope of pasterns. They should also be lively in temperament, free walkers, and straight movers, either at the walk or trot.

The stallions selected should be of the same type but with more size, ranging in height from sixteen two to seventeen hands, and in weight from 1,850 to 2,000 pounds, in breeding condition.

A good set of legs, clean joints, and good quality throughout are absolute essentials in draft horses in this or any other section, and you should not permit anyone to impose upon you by selling you draft horses that are seriously at fault in these particulars. As I see your present situation, I think your chief need is that of good Percheron stallions that can be bred to the thousands of light-weight mares, which are of indiscriminate breeding and type. The progeny from such a cross will be of compact, well-proportioned, nicely balanced type, with a good deal of quality and spirit. If well fed, the colts from the first cross will grow out to 1,400 or 1,500 pounds, and the mares will make admirable work mares. The second cross will give you a little more size and draftiness, and the mares of the second cross will give you more efficient results in farm work than those from the first cross. Their colts,

if well grown out, will prove to be ready sellers as commercial horses to your large cities.

I am thoroughly satisfied that the horsemen of New York State, who have achieved notable success in the production of running and trotting horses, may in time achieve equally notable success in the production of grade draft horses, as well as pure-bred Percherons, for you have good pasturage, with enough rainfall during the summer months to give green pastures even during July and August, when our western pastures are too often burned brown. You have the soil also whereon you can grow abundant crops of alfalfa and clovers. You have oats and barley that are far above the average in weight and in feeding qualities, and your general conditions are therefore favorable to the production of good draft horses. There is absolutely no reason why you should not in time bring forward Percherons bred in New York State that will be creditable competitors in the strongest draft-horse shows in this country.

For a few years, however, I believe that the vast majority of your breeders will do better with grade Percheron mares than they will with pure-breds. As your farmers become more generally acquainted with grade Percheron mares and their advantages in farm work, as draft-horse breeding increases in your state, and the demand for good Percheron stallions acquires sufficient size to afford a ready outlet for a goodly number of Percheron sires, the breeding of pure-bred Percherons will inevitably become a profitable industry within your state.

RANK OF NEW YORK STATE IN PRODUCTION OF PERCHERONS NOW

New York stands eighteenth in the United States now in the production of Percherons, 79 pure-bred horses having been recorded from this state during the last year. These were recorded by 43 different breeders, and as a matter of interest I give below, by counties, the names and addresses of these breeders of pure-bred Percherons in New York State, together with the number of colts each recorded during the last fiscal year.

<i>County</i>	<i>Breeder</i>	<i>Number</i>
Albany	Francis Wright	2
Allegany	C. L. Sisson	1
	Fred N. Tucker	1
Cattaraugus	John M. Parmelee	1
Chautauqua	O. E. Cross	1

<i>County.</i>	<i>Breeder</i>	<i>Number</i>
Clinton	W. H. Miner.....	14
Dutchess	Eugene Ham.....	2
Erie	Clayton C. Taylor.....	1
Genesee	R. P. Dermody.....	1
	George W. and Charles P. Miller.....	2
Jefferson	H. S. Patrick.....	3
Kings	Geo. D. Hamlin.....	1
Livingston	James Noonan	1
	A. J. Stone.....	1
Madison	E. A. Buyea.....	3
Monroe	Geo. H. Harris.....	1
	Frank L. Martin.....	1
Montgomery	A. H. Dievendorff.....	1
New York	James Risk & Co.....	2
Niagara	Henry C. F. Hoefert.....	2
Onondaga	James McNamara	6
	Ambrose E. Smith.....	2
Ontario	R. H. Francis.....	1
	Wm. T. Pennell.....	1
Orange	Chas. W. Cooley.....	1
Rensselaer	James McCart	2
	D. J. Phillips.....	1
St. Lawrence.....	A. W. Murphy.....	3
	Will Porter	1
Steuben	J. B. Lewis.....	1
	Philip Prosser	1
	David F. Stever.....	1
	J. B. Sturdevant.....	1
	T. O. and A. B. Swan.....	2
	Stewart C. Wheaton.....	1
Sullivan	Francis I. Vander Beek.....	1
Tioga	Fred A. Blewer.....	3
	H. H. Fisher.....	1
Tompkins	Cornell University	1
Warren	Adirondack Farms	2
Washington	Lemuel E. Wicks.....	1
Wyoming	Elmer W. Cooper.....	1
	L. Perry & Son.....	1

EXPORT TRADE

The tremendous export trade in horses for war purposes totaled 731,313 head of horses and 223,708 head of mules during the twenty-five months ending October 1, 1916. This has brought our export of horses and mules to the stupendous total of \$200,-247,486, which has been distributed throughout all parts of the United States among farmers and ranchmen. The very strong demand for artillery and transport horses, which brought from \$35 to \$60 more than cavalry horses for export trade, has given renewed impetus to the use of Percheron sires. A very large proportion of these artillery and transport horses have been grade Percherons, produced by crossing Percheron stallions on the common light mares in this country. In fact, men who have been

in particularly close touch with the work of the inspectors declare that at least 75 per cent of the artillery and transport horses have been grade Percherons. How well these horses have met the foreign demand is attested in the leading editorial of the "Live Stock Journal," of London, November 17, 1916, from which we quote the following:

"In the meantime the Percheron type has made many friends in England. The breed, mostly represented, it is true, by 'grade' horses as yet, is firmly established in the hearts and minds of the responsible officers of the British army, for go where one will in army circles he hears nothing but praise for a horse that has proved his sterling worth in artillery. East and west, north and south the story is the same; the half bred Percheron has filled many wants and has proved himself a gentleman of a horse, as well as a willing and never failing worker. We shall have a further opportunity of stating how pleased army men are with the type, but for the moment our chief concern lies in stating the facts of the case in connection with the recent importation of two pure bred Percheron stallions and some brood mares. . . . It is the intention of their owners to use these horses in producing reliable artillery horses from Shire and Clydesdale mares, but they will also breed true to type, using the several Percheron mares accompanying the stallions, and so lay the foundation for an English Percheron Stud Book. Let it be added that this desire to try out the Percheron in England is not an idle whim or passing fancy. It is a thorough determination, brought about as the result of sincere conviction on the part of army authorities that the half-bred Percheron fills the bill best of the many types bought for us the world over since the outbreak of the war."

No better evidence can be asked, coming as it does from men who have for all their lifetimes been familiar with other breeds, and who were in some degree, at least, hostile to Percherons. The adaptability of the breed, the fact that Percheron stallions invariably beget good salable horses from either large or small mares, and the all around enduring and everlasting qualities of the breed have made it the most popular one in America, a popularity that is now increasing by leaps and bounds.

I am very glad to have learned from many men in your state that your farmers are generally becoming aroused to the advantages of using Percheron blood in the improvement of their horse stocks, and I predict that you are but on the threshold of a general improvement which will result in increasing the value of the horses reared in this state by one-half or more within the next ten or fifteen years.

THE PRESIDENT: The next speaker will be Professor R. W. Duck, of Syracuse University, who is to discuss the question of the value of garbage as fed to hogs.

VALUE OF A NITROGENOUS SUPPLEMENT FOR GARBAGE FED PIGS

PROFESSOR R. W. DUCK, SYRACUSE UNIVERSITY

The present high price of feeds has led a great many farmers to wonder where the profit lies in pork production.

The feeding of kitchen refuse to swine is a growing practice in the eastern part of the United States. When practiced by the individual farmer from his own kitchen, it has always been successful and profitable. When tried on a larger scale, however, the results have been generally unsatisfactory. This is probably due: first, to lower feeding value of the garbage, secondly, to the presence of injurious or poisonous materials, thirdly, to the improper handling and methods of feeding. These, of course, operate to the detriment of the general health of the swine, making them more susceptible to all swine ailments. It is not uncommon, where garbage feeding is conducted on a rather large scale, for one or more pigs to die suddenly. On post-mortem, death is usually found to be due to acute gastritis. Chronic constipation is also one of the most common ailments of garbage-fed swine. The danger of transmitting hog cholera by garbage feeding can be greatly reduced or entirely eliminated by having the uncooked ham, bacon, and fresh pork parings put in smaller separate containers. After being boiled for fifteen or twenty minutes, they make an excellent feed and all danger of transmitting the disease is eliminated.

From a feeding standpoint the most valuable part of the garbage is the soup-stock, meat-scrap, and waste bread and pastry. Protein material — meat-scrap — being relatively low in garbage, led the Joseph Slocum College of Agriculture of Syracuse University to undertake an experiment to determine whether the farmer could increase the profit of his garbage-feeding operations by the addition of a nitrogenous supplement. The college has been feeding garbage exclusively to a large herd of swine for a period of six years. The results, on the whole, have been very satisfactory.

The method of handling the fattening pigs has been as follows: The swine are purchased weighing about fifty pounds; they are fed for a period of four to four and one-half months on a garbage ration. At the end of this time they weigh on an average of one

hundred and fifty pounds. The object of the experiment was to determine the advisability of adding a nitrogenous supplement in the form of old process linseed meal or bone and meat meal, to a garbage ration for growing pigs. Three pens of five pigs each were used. Pigs were selected which were uniform as to size, weight, conformation, breeding, vigor, and sex, or as nearly so as circumstances would permit. They were weighed individually for three consecutive days, and the average of the three weights taken as the initial weight. Individual weights were taken every two weeks thereafter throughout the entire feeding period. At the close of the experiment they were again weighed for three consecutive days, and the average weight of the three days taken as the final weight.

The three pens were fed for a period of sixty-four days, November 14, 1916, to January 16, 1917, inclusive, as follows: Pen 1 received only garbage. Pen 2 received daily .6 of a pound of old process linseed meal to each 100 pounds live weight, as a supplement to the garbage. Pen 3 received .5 of a pound of bone and meat meal per 100 pounds live weight, as a supplement to the garbage. The pigs in all pens were fed twice daily.

In feeding garbage to pigs, it is of great importance that they be fed only what they will clean up. If any feed is refused, it should not be allowed to remain in the trough until the next feeding time. If allowed to remain indefinitely in the trough from one feeding period to the next the pigs will soon "go off their feed," and some may even die. This is probably due to a form of ptomaine poisoning. Feeding troughs and all receptacles must be washed daily; by keeping these sweet and clean, one of the most important steps in successful garbage feeding will have been accomplished.

The garbage fed to the college herd is collected once daily from the college dormitories. The motor-truck employed for general use about the college farm is used for the hauling. Covered metal cans holding about one-half barrel each are used as receptacles. Empty cans are kept in the dormitory kitchens, thus necessitating a double set of cans. Care is exercised in the kitchens to keep out injurious substances, such as soap powders, dish water, lye,

cans of all kinds, glass, cleaning solutions, uncooked pork trimmings, and fish and chicken entrails.

Upon arrival at the farm the garbage is emptied on a large wooden trough and is carefully sorted over to remove any material that might be injurious. In general, it does not pay to include onion tops, pea or bean pods, or corn husks, as they have a low feeding value and are not greatly relished by the swine. After being sorted, the garbage is emptied in a large metal tank on rollers; about twice its volume of water is added and the entire contents thoroughly mixed. An average of eight hundred pounds of garbage is collected daily for the college herd of 141 head. When fed, this is mixed with sufficient water to increase its weight to approximately 2,000 pounds. The cost of 100 pounds of garbage, figured on a fed basis after addition of water, is as follows:

COST OF 100 POUNDS GARBAGE

Interest on containers, \$21 at 5 per cent.....	\$0.029
Depreciation on containers.....	.290
Herdsman	1.330
Truck driver . . . . .	.500
Interest on truck for two hours used daily 5 per cent. on \$1,000 investment . . . . .	.290
Gasoline . . . . .	.240
Depreciation on truck 20 per cent. for two hours used daily.....	.109
	<hr/> \$2.526
\$2.526 divided by 20,000 equals.....	<hr/> <u>12½ cents</u>

At the beginning of the experiment, old process linseed meal was quoted at \$44.50 a ton, and bone and meat meal at \$45.00 a ton.

With the exception of pig 1, Pen 1, and pig 6, Pen 2, all of the experimental pigs used were grade Chester Whites. Pigs 1 and 6 were pure-bred Chester Whites, sired by Onondaga Chief 29699, and out of Onondaga Maid 65524 (Chester White Record Association). All the other experimental pigs were sired by Onondaga Chief 29699, but were out of grade Berkshire sows carrying some C. I. C. blood.

During the Christmas holidays it was necessary to feed corn meal to all pens due to the closing of the dormitories. The corn meal is figured at ninety-two cents per bushel. In a sixty-four-

day feeding period the following results were obtained: Pen 1, fed garbage alone, consumed a total of 5,696 pounds of feed, or an average daily ration of 17.83 pounds a head. They made a total gain of 243.65 pounds or an average daily gain of 0.761 pound a head. At the beginning of the experiment they were valued at \$7.50 per head, and at the close \$11.23, or a total increased value of \$18.65 for the entire pen. The total production cost in Pen 1 was \$7.67, which leaves a total profit of \$10.98. Pen 2, fed garbage and old process linseed meal, consumed a total of 5,973 pounds of feed, or an average daily ration of 18.69 pounds per head. They made a total gain of 355 pounds, or an average daily gain of 1.109 pound per head. At the beginning of the experiment they were valued at \$7.50 and at the close \$13.60 per head, or a total increased value of \$30.95 for the entire pen. The total production cost in Pen 2 was \$12.819, which left a total profit of \$18.14.

Pen 3, fed garbage and bone and meat meal, consumed a total of 5,910 pounds of feed, or an average daily ration of 18.49 pounds per head. They made a total gain of 270 pounds or an average daily gain of .84 pound per head. At the beginning of the experiment they were valued at \$7.50, and at the close \$11.82 per head, or a total increased value of \$21.60 for the entire pen. The total production cost in Pen 3 was \$12.48, which leaves a total profit of \$9.12. It should be remembered that over two-thirds of the ration was water, hence the large daily consumption. The buyer for a local packing-house placed the following prices on the pens at the close of the experiment: Pen 1, \$9.25 per hundred-weight; Pen 2, \$9.50 per hundred-weight; and Pen 3, \$9.30 per hundred-weight. The difference in price was due to the greater weight, superior finish, and less paunchiness shown by the pigs in pens 2 and 3. Another important factor in the feeding test was the effect of the nitrogenous supplement on the bowels of the pigs. The pigs fed garbage alone were troubled frequently with constipation. The feces of the pigs fed garbage supplemented with old process linseed meal were abundant and normal throughout the entire feeding trial. The pigs fed garbage supplemented with bone and meat meal were troubled occasionally with diarrhea. Their bowels were looser than normal throughout most of the feeding trial.

The pigs in Pen 2 had keener appetites and were thriftier than those in pens 1 and 3. At the close of the experiment, they also showed less paunch than the pigs in Pen 1. The pigs in Pen 3 had slightly keener appetites and showed considerable less paunch, at the close of the experiment, than those in Pen 1.

The addition daily of 0.6 of a pound of old-process linseed meal, per 100 pounds live weight; to a garbage ration for growing pigs, at the prices quoted proved to be profitable, while the addition of 0.5 of a pound of bone and meat meal, per 100 pounds live weight, at the prices quoted did not prove profitable.

The experiment reported contains the results of only one feeding trial with a limited number of pigs and is therefore not conclusive.

THE PRESIDENT: I am pleased to introduce to you Dr. U. G. Houck, of the United States Bureau of Animal Industry. The secretary of agriculture has shown his great interest in our meeting by sending Dr. Houck to us.

FOOT-AND-MOUTH DISEASE

DR. U. G. HOUCK, U. S. BUREAU OF ANIMAL INDUSTRY

Foot-and-mouth disease is one of the oldest known diseases, and in the countries where it has become indigenous it is more dreaded than any other animal plague. It is believed to be of Asiatic origin and since its appearance in Europe (Germany, Italy, and France) in the seventeenth century it has not only withstood the perpetual warfare waged against it, but has gradually spread to every country in the world and has become permanently implanted in most of them. With the rapid development and extension of the commercial relations between the various nations during the nineteenth century, there was a correspondingly rapid diffusion of foot-and-mouth disease. It appeared in Hungary, Austria, Bohemia, Saxony, and Prussia in 1834; Switzerland in 1837; England in 1839; Denmark in 1841; South America and the United States in 1870; and Australia was invaded in 1872. Considering the determined opposition that it met within various sources, its progress seems to have been irresistible; but those who are most familiar with the disease and the

provisions of nature for the perpetuation of the virus are least surprised at its steady spread.

Eminent scientists provided with unlimited means and facilities have sought in vain during the past century to discover the minute organism that causes it, but up to the present time the character of the virus has not been determined other than to learn that it is invisible under the highest power microscope, that it will pass through bacterial-proof filters, that it escapes from the open lesions of affected animals and is disseminated by so many carriers and in such insidious ways that under existing conditions it is difficult or impossible to confine it to a limited area by the application of quarantine measures. The restraint of the disease is made more difficult too because practically all species of animals are more or less susceptible.

Foot-and-mouth disease is especially dreaded because it is so extremely infectious and because the losses that result from it are so great. In those countries where it has become permanently implanted, it is dreaded more and causes more damage than any other animal scourge. Dr. Cope, an eminent English authority, states "that as nearly all classes of animals on the farm are susceptible, the indirect losses are much greater in the case of foot-and-mouth disease than rinderpest or pleuropneumonia and that in England it has caused enormous losses and inconvenience, greater than all other contagious diseases combined." Haffner, speaking of the prevalence of foot-and-mouth disease in Germany, states that "it has caused much greater losses in that country than all other enzootic diseases combined." In the United States the disease has never assumed its most destructive form and we have never permitted an outbreak to extend sufficiently or to continue long enough in a large number of herds scattered over a wide area even to estimate intelligently the extent of the damage that would result from a continued outbreak.

In some of the outbreaks in foreign countries the disease at times has been extremely malignant and destructive. Friedberg and Frohner state that in Europe the disease at times is so malignant that from 5 to 50 per cent of the adult animals and 50 to 80 per cent of the young die. Fleming stated in 1875 that it has been calculated that the average loss from death in recent out-

breaks in localities where it has been severe in Great Britain was 10 per cent. Professor Bang of Copenhagen, at the present time probably the most eminent authority on foot-and-mouth disease, has stated that in 1872 in the French department of Nevers more than 20 per cent of the calves and 22 per cent of the pigs were destroyed by the disease in the course of two months. In the summer of 1892 he reports that in Bavaria over 3,000 head of cattle died of it and, in 1896, in Wurtemberg, 1,500 perished. At Barcelona in Spain there died in 1901, 50 to 70 per cent of the young cattle. The loss suffered by Germany in 1892 when on 150,929 farms over 1,500,000 head of cattle, over 2,000,000 sheep and goats, and over 400,000 pigs were affected is estimated at \$25,000,000, and the outbreak of 1911 cost that country considerably more. In the small country of Denmark, which compares in size with Rhode Island, Connecticut, and Massachusetts, the disease has caused enormous losses. In 1892 about 400 herds were affected, in 1911 no fewer than 1,285 herds were attacked, and in 1914 at about the same time the disease made its appearance at Niles, Michigan, it began to spread in Denmark again and continued to spread so rapidly that 5,734 infected herds were reported between November, 1914, and August, 1915, a period of nine months, and at the end of that period the aggregate loss to owners of the diseased cattle in milk alone amounted to about \$1,250,000.

A comparison of the results of some of the European outbreaks with those that have occurred in the United States is very gratifying to us but invariably arouses a feeling of apprehension for our future safety. We have been very fortunate in the past as the disease in this country has never assumed the malignant form. We have had but six visitations in 46 years and each time it has been promptly and successfully eradicated. The six outbreaks in this country occurred in 1870, 1880, 1884, 1902, 1908, and 1914. The outbreak of 1914 was more extensive than all of the other outbreaks combined, but even this outbreak was eradicated within 18 months at comparatively small expense. During this outbreak 3,556 herds numbering 77,240 cattle, 85,092 swine, 9,767 sheep, and 123 goats were destroyed at an appraised value of \$5,865,720. In addition to the appraised value of the animals

slaughtered there were expenses for disposal of carcasses, disinfection of premises, purchase of supplies, and for travel, subsistence, and salaries of inspectors. The total expenditures by the Federal Government amounted in round figures to \$4,600,000. If to this a similar sum to represent the expenditures by the states is added, the total cost of eradication comes to approximately \$9,000,000. This amount is less than one-half the estimated cost of a modern battleship and about one-third of what the disease costs Germany in some years. The expense of eradication was trivial compared with the damage that would have resulted if the disease had escaped control and had become permanently implanted in the United States. There is no doubt but that at times it would become as destructive in this country as in European countries and our yearly losses would be greater in proportion as we have many more susceptible animals and our conditions and methods of handling them on large farms, open ranges, and through large public markets are not so favorable for controlling the disease.

Although we have been comparatively fortunate in the past, our experience with the 1914 outbreak and our miraculous escape from the disease becoming permanently established in this country has taught us to dread it more than ever before. Someone has said, "In time of peace prepare for war." This caution is also applicable to foot-and-mouth disease and should be heeded by every country and state that is free from the pest.

It is a matter of public interest to know what the Federal Government is doing now to prevent the reintroduction of the disease into this country, and what the Bureau of Animal Industry and the states are doing in preparation to meet promptly and effectively another outbreak should one occur.

Ample law, sufficient funds, efficient organization, and a perfected plan of procedure are the most important points to be considered in our preparation for future outbreaks. Sufficient statutes have been enacted by Congress to prevent, as far as possible, the reintroduction of such infectious animal diseases into the United States. The first law of this character was passed by the 39th Congress, December 18, 1865, prohibiting the importation of cattle and hides as a precautionary measure against rinder-

pest, which at that time was prevalent in Great Britain. The law of 1865 remained effective until 1874 when it was enacted as part of the revised statutes.

The act of March 2, 1883, appropriated funds to establish quarantine stations for the detention of imported animals. The administration of this act was under the direction of the secretary of the treasury. The laws of 1865 and 1883 applied only to cattle and hides, but, on August 30, 1890, an act was passed that also covered the importation of sheep and other ruminants and swine. The administration of this act was entrusted to the secretary of agriculture. These acts were further strengthened by the acts of February 2, 1903, and March 3, 1905.

Under existing laws there is maintained a permanent quarantine against the importation of animals from abroad. Imported animals are admitted into this country only on permit and must be held for a specified period of time at the port of entry quarantine station for observation and the tests deemed necessary in order to ascertain whether they are free from infectious diseases.

To guard more effectually against the introduction of harmful animal diseases from abroad, the regulations covering the importation of animal products were recently revised. The revised regulations became effective January 1, 1917. The regulations now in effect govern the certification and disinfection of hides, fleshings, hide cuttings, parings, and glue stock, sheepskins and goatskins and parts thereof, hair, wool, and other animal by-products, hay, straw, forage, or similar material offered for entry into the United States. Before these regulations were issued, they were passed upon by the secretary of the treasury who participates in their administration, by officials of the United States Public Health and Marine Hospital Service, and by some eminent authorities outside of the Federal service. It is believed they are as comprehensive as it is feasible to make them at this time.

The introduction of food-and-mouth disease into this country through the importation of the contaminated smallpox virus that caused the outbreak in 1908, lead to the enactment of the law of March 4, 1913, "governing the preparation, sale, barter, exchange, shipment, and importation of viruses, serums, toxins, and analogous products intended for use in the treatment of

domestic animals." Under this law such products are admitted into this country only on permit and affidavit, and they are subject to examination and tests before they are released for use.

In our previous outbreaks of the disease considerable inconvenience was experienced, and the work of eradication was retarded to some extent because neither the Federal Government nor the states had provided funds in advance to meet such an emergency promptly. In order to prevent such a recurrence, the 64th Congress appropriated funds and we now have available for immediate use in case of another outbreak the sum of \$1,896,000. It is considered that this amount would be sufficient to carry on the work in event of another outbreak until Congress could provide additional funds.

To combat foot-and-mouth disease successfully, organization comes next in order of importance after law and funds. It is believed that as a foot-and-mouth disease fighting force, the United States Bureau of Animal Industry is the strongest organization of its kind in existence. Its past achievements and especially the part it played in eradicating the extensive outbreak of 1914 seem to indicate that it is deserving of that distinction. At the height of that outbreak, foreign experts expressed the opinion that the disease had become so widely spread in the United States that eradication seemed to be an impossible task. This bureau now has in its employ 4,072 persons of which about 1,250 are veterinarians, and it is able on twenty-four hours' notice to place 500 experienced men in the field.

The employees of the bureau have been provided with printed instructions dated November 26, 1915, covering the proper methods of procedure from the time the first suspicious animal is discovered until the infected premises are ready for release from quarantine. It is believed these instructions will be of great assistance to both bureau and state inspectors in case of another outbreak of the disease.

The bureau has not only instructed all of its employees in advance in regard to methods of procedure, but in addition it has selected the men to fill the various assignments in event of another outbreak. Their names with their assignments are on file so that

within an hour instructions could be telegraphed and each man would know his place and duties in the field organization.

It has been demonstrated in our experience that a campaign of education in an infected district is indispensable in connection with the most successful eradication measures. In order to be ready to start educational work promptly on the first appearance of the disease, the bureau has ready for immediate distribution literature on the subject of foot-and-mouth disease including bulletins, pamphlets and newspaper articles. To facilitate educational work further, the Federal Department of Agriculture recently purchased the reels of moving pictures that were taken in New York State during the 1914 outbreak to show the various field operations in foot-and-mouth disease eradication work.

The bureau is now supplied with the various blank forms used in connection with eradication work and has on hand a large quantity of other supplies left over from the 1914 outbreak.

Recognizing the possibility of recurrences of the disease from infection harbored since the last outbreak, the bureau has continued to maintain a limited force of experienced veterinarians in the territory where the disease occurred in 1915. It is the duty of these veterinarians to visit the various farms where the disease existed and investigate any rumors pertaining to the unhealthy condition of the susceptible animals in their respective territories. This force has not been entirely withdrawn from the field to date, although it has been almost a year since the last regular outbreak.

After the outbreak of 1914-15, the bureau directed its attention to imported animal products from South America, as a possible source of infection. In order to obtain facts, one of the most competent veterinary inspectors in the bureau was detailed permanently to South America to report to the chief of the bureau on the extent and spread of the infectious diseases of animals in that country, the methods of control or eradication employed, the efficiency of the ante- and post-mortem inspection of animals the products of which are intended for export to the United States and to keep the bureau informed concerning all matters of interest in order that further action may be taken if necessary to pro-

tect our country as far as possible against the invasion of disease from that source.

Veterinarians representing the bureau have been stationed in Great Britain continuously since July, 1890, to guard our interests in connection with the live-stock traffic carried on between this country and the European continent.

I have stated briefly what is being done by the Federal Government to protect this country against the introduction of foot-and-mouth disease and to prevent, so far as it has jurisdiction, the spread of the infection from one state to another. It is important also that each state be prepared and equipped, ready to do its part in handling a future outbreak of the disease. If the state laws have been found to be inadequate or defective, they should be revised. The statutes in the various states relating to the suppression of highly contagious diseases should be uniform and in harmony with Federal statutes. They should be drawn so that they do not hamper sanitary authorities in the exercise of their judgment in regard to the extent or duration of quarantine. They shall provide authority for forcing entry and compelling the destruction of animals and property. They should provide for just remuneration for pure-bred animals and all other stock slaughtered on account of the disease and they should give wide range of power to a competent executive or body to promulgate regulations without delay to meet conditions as they arise. Any attempt to regulate minor matters by statute is sure to lead to embarrassment and hamper officials when they have to deal with unforeseen contingencies.

All veterinary practitioners should be required by law to report immediately to the proper officials all cases of the disease that come to their attention.

In tracing the sources of infection during past outbreaks of the disease, it was found that in some communities a careless or indifferent veterinarian was responsible for the spread of the infection in his practice. Usually the damage had been done unwittingly. In some instances, however, it was found that the old veterinary practitioner did not believe in the germ theory of disease as firmly as he should; neither did he believe that foot-

and-mouth disease is as harmful as represented, because affected animals responded promptly to his care.

Each state should organize and maintain an efficient veterinary force to cooperate with the U. S. Bureau of Animal Industry in cases of emergency and to handle efficiently the states' share of the work of eradication. In this respect most of the states have been remiss in the past and in a great majority of cases were able to furnish no experienced, well-trained assistants to cooperate with the Federal force.

At the beginning of the last outbreak the Federal Government had only a small available fund on hand and most of the states had no appropriation whatever for meeting their share of the expenses. The Federal funds soon became exhausted, and it was necessary to ask owners of affected herds about to be slaughtered to sign a release without Federal or state funds in sight to pay them for their animals or other property destroyed, and if the bankers, at the earnest solicitation of the inspectors in charge of field operations, had not come to our assistance with funds, we would have been unable in some communities to hire a sufficient number of men to bury the diseased animals and disinfect the premises. In some instances the bureau and state inspectors used their own savings in order to carry on the work until arrangements could be made with the banks to pay laborers. In order to obviate such embarrassing conditions in the future, the interested live-stock owners in every state should see to it that funds are appropriated and made immediately available in case of necessity or that a law is passed authorizing the governor of the state to issue interest-bearing certificates of indebtedness until an appropriation has been made to meet all obligations.

One of the most necessary precautionary measures to be considered in the preparations to combat foot-and-mouth disease is a law in each state requiring the sterilization of raw dairy products before they are returned to the farm. In August, 1914, foot-and-mouth disease appeared first in a small drove of hogs near Niles, Michigan. It was about two weeks before the disease appeared in the cattle on the same premises and a few days later the cattle on one of the neighboring farms commenced to show symptoms of the disease. On September 3, there were but two herds known

to be affected. During the four weeks following that date, the disease appeared in only six more herds, and they were located in that immediate vicinity. Up to October 5, only eight herds in all were known to be affected. The disease was of a very mild type and up to this time showed disinclination to spread rapidly. By October 12, however, numerous reports of affected herds were being received from territory lying west and southwest of Niles. It was reported that the disease usually appeared first in the hogs or calves on a farm and later spread to the adult cattle. Investigation revealed that milk had been delivered to a creamery in that vicinity from one or two of the six small herds that came down with the disease between September 3 and October 5. It was found that the rapid spread of the disease was due to creamery infection. The creameries located at Niles, Buchanan, and Dayton were closed immediately by the state authorities, but during the three weeks preceding their closing the virus had been transmitted from the one or two small herds to about 170 others through unsterilized skim milk from the creameries, and, as a result, it became necessary to slaughter 243 herds within an area eighteen miles long by eight wide surrounding these creameries.

We also had a rapid spread of the disease at Holland, Michigan, through creamery infection. In this instance deliveries of milk from one slightly affected cow to the Holland creamery on two successive days resulted in an infection of 20 out of 59 herds belonging to the patrons of that creamery. Fortunately the skimmed milk vat in this creamery was unusually small, which probably explains why a larger percentage of the fifty-nine herds did not become infected. These two examples in the Michigan outbreak serve to show the facility with which such infectious diseases as foot-and-mouth disease, tuberculosis, and contagious abortion are spread through raw products from public creameries and cheese factories. It seems that it would be impossible for man to devise a more ideal plan for the rapid dissemination of the infectious diseases of animals.

It is generally known that from 10 to 30 per cent of the cattle in some states are affected with tuberculosis, and the tests made show that in some sections of the country the milk from 12 per cent of the cows contains the contagious abortion bacillus. When

we are confronted by such facts, it may be charged that the live-stock owners in some states have been neglectful of their best interests and remiss in not protecting their industry by a law requiring the pasteurization of skim milk, butter milk, and whey at creameries and cheese factories before these products are returned to the farm or sold.

Finally, there should be a definite understanding in advance between the officials of the department of agriculture and each state in regard to the cooperative relation and the sharing of expenses, should another outbreak occur. We have been free from the dreaded disease now for almost a year, and it is time that all these important matters receive attention, if they have not, for we do not know how soon we may be called upon to show whether or not we have profited by our experiences and are found ready when called upon to attack another outbreak of foot-and-mouth disease.

THE PRESIDENT: It is now past the usual time for adjournment for luncheon, but inasmuch as the address of Professor Seulke will close the program I ask that we do not adjourn. We can all eat a little more later. I have the pleasure of introducing Professor K. J. Seulke, instructor in the Department of Animal Industry at Cornell.

SWINE HUSBANDRY IN RELATION TO NEW YORK STATE FARMERS

PROFESSOR K. J. SEULKE, CORNELL UNIVERSITY

The first and most vital question that arises in considering the relation that should exist between the New York State farmers and pork production is the question of profitableness. If hogs can be produced at a profit under New York conditions, all that remains is to determine the method of production that will insure the largest profit.

I believe that under average conditions and during normal years every general or live-stock farmer in the state should produce his own pork, and some in addition, and that many farmers might make a larger profit than they are making if they make pork production one of their farm enterprises.

Whether a farmer should take up pork production or not, and

if so to what extent he should develop this phase of his business, depends entirely upon the conditions under which he is farming. While the production of hogs in this state is, and always will be, a minor farm enterprise, still it is of enough importance that it should receive more attention than it has in the past. The total value of hogs in the state is about \$6,000,000, and the price of pork is rapidly rising so that the total value of hogs in the state should increase rapidly within the next five years.

The hog is the most economical machine for converting feed into meat whether this feed be concentrates or pastures. In the corn belt the hog is kept to consume large quantities of corn and convert it into meat, and this combined with the fact that corn is cheaper in the corn belt than in New York is the principal reason that most men have for believing that hogs cannot be profitably kept under our conditions. In the far western states, however, where corn is not grown and where hogs are becoming very popular, they are produced more cheaply than in the corn belt on a ration made up largely of alfalfa and containing no corn whatever. Under New York conditions we can produce both alfalfa and corn, the two best feeds we have for hogs, and we are nearer the higher priced hog markets of the country where we can market our hogs at less expense and at a higher price than the western breeders.

Hogs are easily handled; they mature early and reproduce more rapidly than other farm animals, so that on farms where corn and alfalfa, or other leguminous pastures can be produced, they should pay a profit, if properly fed, bred, handled, housed, and protected from disease.

The hogs bred by farmers in New York State are in most cases of nondescript breeding and of no particular type, although there are an ever-increasing number of breeders who are either producing pure breds or are improving their grade herds by using pure-bred sires. The number of pure-bred hog breeders will always be small and the number of pure breds need never exceed 5 per cent of the total number of hogs, but the grade hogs should be gradually improved in size, conformation, breeding qualities, and feeding and grazing qualities. This can be brought about only by the use of pure-bred boars of good quality and by practicing rigid

selection. As the number of pure breds is still far below one per cent of the total hog population of the state, there is still room for a large number of pure breds.

The average farmer keeps only a few hogs, often only a brood sow or two, and he practices little or no selection in choosing his breeding stock. He usually chooses the largest gilt from a litter, regardless of her other body characters, breeding, or the size of litter, or parents from which she came, and breeds her to any boar he may have on the farm, or to the nearest neighbor's boar without regard to his breeding or the type of pigs he has got in the past. Such lack of selection naturally results in no improvement, and in fact it really results in degeneration for no one line of breeding, type, color, or conformation is adhered to.

The sow pigs selected for breeding should be those with the most desirable conformation, especially as regards the arch of the back and the strength of the feet, two points where most inferior hogs are found lacking. They should be large thrifty pigs chosen from large litters produced by sows that are large milkers and by boars that are noted for the quality and vigor of the pigs they produce. They should be blocky and compact in conformation, being long-bodied with broad back and deep sides having an even width from end to end. The hams should be full and well developed in order to carry out the massive conformation of the body. The legs should be short and set squarely under the animal, and although a strong bone is desired, the legs, head and general conformation should suggest refinement rather than over coarseness. It is desirable to have the animal possess good size for its age because this growthiness will be transmitted to its offspring.

After the gilts have been selected, and grown under conditions conducive to a conservation and development of breeding powers, together with a proper development of the body in all its parts, they should be bred to a boar possessing all of the qualities stated above in a greater degree. The boar should be of a type and breed that is best suited to the conditions of this state, and this one breed should be adhered to ever afterward. The use of boars of first one breed and then another produces scrub hogs of no particular type, and improvement along one or more lines is prac-

tically impossible. It is well to select the best boar possible for the first cross, and then to be sure that each succeeding boar is better than the last so that improvement may be effected.

The question as to the breed best adapted to New York conditions is a common one, and at the outset I may say that I do not intend to champion any one breed. There is no best breed for all conditions; neither is it possible to say that all the individuals of a particular breed will give the best results under any one condition. All breeds are good provided good individuals of the breed are chosen, the principal difference being between types and not breeds. Certain groups of breeds or types are better adapted to given conditions than others and since a number of breeds are very similar in many respects, I will simply describe the type of hog best suited to New York conditions and enumerate some of the breeds falling within this type, for here as in all cases the final selection of a breed will lie with the individual breeder and be determined by his personal likes or dislikes.

Owing to the fact that New York is a forage-producing state rather than a grain-producing state, the use of soiling crops, pastures, and hays must play an important part in the feeding of her hogs, and since hogs consume only small amounts of dry hay to advantage, the breed chosen must be one that is well adapted to grazing. In former times, and in many cases at the present time, hogs were and are kept under conditions entirely foreign to the animal in its natural state, and as a result the prepotency, prolificacy, size, vigor, and thrift of the animals and descendants have suffered.

It is not uncommon in this state for a farmer to build a hog pen on stilts or posts, having a small covered house eight or ten feet square for the animal to eat and sleep in, and with an outer pen (also on posts) of about the same size with board floors in which the animal is to exercise. Contrast this with the natural environment of the animal in the wild state where he roams at large, feeding on small animals, insects, plants and nuts, and having nothing but the earth under foot and a few bushes or trees overhead. True our present-day hog has been greatly changed from his ancestor in appearance, but he still does best under conditions that are as nearly like those of the wild state as we can make

them, except that, since we have pampered him considerably and bred off his protecting coat of bristles and heavy hide, we must protect him from the cold rains and blasts of winter.

Since the hog in his natural state feeds upon herbage of many kinds which form a large proportion of his diet, the idea of pastures for hogs is not a new one. The use of pastures simply affords one means of making the hog contented with his ration and surroundings, and at the same time cuts down the feed bill and substitutes a home-grown feed for a highly expensive concentrate that will be used to better advantage in finishing the hog for market. Pastures not only produce more economical growth, but what is equally important they afford exercise to the hog which is extremely important in the maintenance of thrift and vigor.

Inasmuch as New York, as a state, is better adapted to the production of forage crops than to the production of grains, and since pastures afford protein food and exercise, improve sanitary conditions, maintain the fertility of the soil, and cut down the cost of labor, the breed of hogs chosen should be one that combines with other qualities an ability to make the best use of pastures.

The market prefers a hog that weighs from 175 to 250 pounds, and it is therefore important that the breed chosen be one that will attain this weight at an early age and be mature enough that it will combine the desired body conformation and weight.

The bacon breeds are not common and do not bring a premium on our American markets. The two principal bacon breeds are the large Yorkshire and Tamworth, both of which make excellent use of pastures, but are slow in maturing and therefore cannot be marketed at so early an age. Both breeds are prolific and, if early-maturing strains are chosen, they may give good results under our conditions. Taking all things into consideration, I think the type of hog best adapted to our conditions must be of the lard or semi-lard type in order to obtain the desired conformation and weight at an early age. The more active and prolific type of lard hog must be chosen, however, in order that we may make the best use of pastures, and that the initial cost per pig at weaning time may be as low as possible. It is my opinion that the breeds of hogs filling these requirements to best advantage are the Berkshire, Duroc-Jersey, Hampshire, Cheshire, and Chester-White.

This list is simply a suggestion, for, as I have said before, the final selection of a breed depends upon the preference of the breeder and should be the one best adapted to his farming conditions.

The housing facilities necessary depend largely upon the number of hogs produced. Where only a few sows are kept for breeding purposes, the colony system will serve the purpose very well. In this system the houses are small inexpensive buildings of the A- or shed-roof type. These are about eight feet square, and are used to house one sow and her litter until weaning time, after which they may house the litter until ready for market, and during the winter will serve to house from five to eight mature sows.

The piggery system is used on larger farms where a large number of pigs are grown, and especially where pure breeds are produced, and where two litters are dropped by the sows each year. These houses contain a number of farrowing pens, feed bins, a warm room, and fattening pens. The straw and feed being usually kept on the second floor, which may or may not extend over the entire first floor. The larger plants also provide a room for the herdsman in the building. The piggery is permanently built while the colony house is portable. Combinations of the two are sometimes used on the larger farms.

Some of the advantages of the colony system are: low initial cost per unit; portability; opportunity for exercise; more sanitary houses in that they are a distance apart and the spread of disease through the herd is less likely to take place.

The disadvantages of the colony system are: lack of centralization; lack of permanence; greater labor requirement in feeding; isolation of certain units likely to lead to neglect.

The advantages of the piggery system are: centralization; permanence; earlier production of pigs; two litters produced in a year; feeding more carefully attended to.

The disadvantages of the piggery are: the easy spread of disease; restriction of animals' exercise; difficulty in keeping sanitary; adaptation to the use of dry lots rather than pastures.

The essential features of a good hog house, no matter what the type, are warmth, plenty of light, good ventilation, and a construc-

tion that affords easy cleaning and disinfecting. The old adage, "An animal well housed is half fed," applies to hogs as well as to any other kind of live stock.

If the pigs are well bred and properly housed, the next step is to see that they are properly fed. Unless the pigs are properly fed, they will not mature into hogs that will pay a profit on the market or in the breeding herd.

To the practical hog man the most important phase of herd management is the proper feeding of the pigs that are to be used for breeding purposes, especially from weaning time to the time when they are placed in the breeding herd. If the rations are not conducive to growth, or any of the elements or other qualities that lead to maximum growth be lacking, the pig will be stunted, and in all probability the succeeding generations will suffer both in number of litters, size of litters, and weight at birth and maturity. On the other hand, if feeding is over abundant and large quantities of feeds rich in carbohydrates and fats are used, especially when succulence and exercise are limited, the results will be even more pronounced. Poor selection of feeds, without regard for the needs of the growing pig, will bring about a useless waste of feed, a diminution of size, and a weakening of the reproductive system, which cannot be overcome by later feeding or management.

The three elements in the ration of the growing pig that are more important than all others are: protein, succulence, and digestibility. In New York State there are no elements that are more generally ignored. Without the use of protein in one form or another it is absolutely impossible to obtain the maximum growth. Without succulence it is impossible to maintain the freshness, vigor, and laxative digestive systems found in pigs receiving a succulent feed in the ration. Digestibility is essential, for a ration that is indigestible not only affords less nutriment than one of equal chemical composition that is easily digested, but greater energy is expended in the handling of the food in the digestive tract, all of which prevents the animal from making a maximum gain in growth or fat.

Together with these three elements it is necessary that opportunity for plenty of exercise be afforded, in order to maintain the

health and vigor of the hog at any age, but doubly so at the stage of development when the pig is building osseous, muscular, digestive, and reproductive systems to serve it throughout life.

The system of management which provides the above elements most satisfactorily, when economy of labor and feed are considered, is the system whereby the greatest possible use is made of pasture or forage crops, especially during the growth of the pig.

The pasture provided will depend upon the possibilities of the soil to a large extent. Leguminous pastures are always to be preferred, and if alfalfa can be grown there is no better pasture throughout the summer if it is properly handled. Red clover also provides excellent pasture, although it does not last over so long a period of years. If alfalfa cannot be produced and the breeder fails to get a stand of clover, he may plan a rotation of crops to supply him with pasture throughout the summer. Rye makes the earliest spring pasture if sown in the fall. Rape, peas, and oats, sown at the rate of two bushels of oats, two bushels of peas, and three to five pounds of rape per acre, gives a good pasture that lasts until late summer, after which a crop of rape alone will furnish pasture until the snow flies. Pigs on pasture should be rung so that the pastures will last longer. Pigs will obtain more feed from a pasture if they are allowed to feed on only part of the field at a time.

The last but not the least important factor influencing swine husbandry and its relation to the New York State farmer, is the prevention of disease in the swine herd. If hogs are bred for constitution and vigor and are properly housed, fed, and managed, the farmer need fear little the ravages of disease as long as he practices ordinary precautions. Most of our commoner diseases of swine may be traced directly or indirectly to some fault of feeding, housing, or management. Examples of these are thumps, scours, rheumatism, colds, pneumonia, rickets, and a feverish condition of the sow at farrowing time.

Contagious diseases, of which cholera is the most common and most important example, can be prevented in a large measure by quarantining all new animals that are brought on the farm, and by preventing the hogs from coming in contact with carriers in every manner possible.

In closing I may say that it is my firm belief that if the future price of pork remains high, and there is every indication that it will, the production of pork will become more popular as well as more profitable year by year, provided the New York State farmer realizes the importance of the factors of breeding, feeding, housing, and the prevention of disease.

Meeting adjourned.

In connection with the annual meeting of the New York State Breeders' Association there were held on Tuesday afternoon and evening, January 9, meetings of the following affiliated societies:

New York State Guernsey Breeders' Association,

New York State Jersey Cattle Club,

Empire State Ayrshire Club,

Holstein-Friesian Club of New York,

Berkshire Swine Breeders' Association,

Cheshire Swine Breeders' Association,

American Cheviot Sheep Society,

New York State Draft Horse Breeders' Club,

New York State Association of Horsemen.

At the meeting of the New York State Draft Horse Breeders' Club, President E. S. Akin, gave an illustrated address on "Draft Horses That Can Win."

The evening of Tuesday, January 9, was set aside for a meeting of the New York State Sheep Breeders' Association, and there was a large attendance from all parts of the state.

Hon. D. P. Witter, of Berkshire, New York, and Professor H. E. Babcock, of Ithaca, Assistant Director of Farm Bureaus, addressed the sheep breeders on the subject of "Legislation Necessary to Increase Interest in Sheep Breeding."

FIG. 1. A FLOCK OF HAMPSHIRE IN PASTURE



STATE OF NEW YORK
DEPARTMENT OF AGRICULTURE

CHARLES S. WILSON, Commissioner

Bulletin 96

The Sheep Industry in New York State

**Issued by the Bureau of Farmers' Institutes and Compiled under the
Supervision of the Director**

CONTENTS

	PAGE
Introduction	883
History of Sheep in New York, E. van Alstyne.....	885
Fencing and Pasture, E. van Alstyne.....	897
The Sheep Industry, Damage by Dogs, and the Remedy, D. P. Witter....	904
Sheep Buildings for Winter Protection, T. Reg. Arkell.....	926
Summer Housing of Sheep, T. Reg. Arkell.....	938
Common Diseases of Sheep and Their Treatment, R. A. Craig.....	941
Selection and Care of Breeding Flock, E. van Alstyne.....	947
Raising Winter Lambs, C. C. Perry.....	960
Winter Feeding of Lambs, I. C. H. Cook.....	964
Conditions Affecting the Wool Industry, A. C. Bigelow.....	969
County Cooperation, F. S. Barlow.....	975
Sheep at the New York State Fair, F. D. Ward.....	979
Slaughtering and Marketing Mutton and Lamb, K. J. Seulke.....	987
The Value of Mutton as a Food, Ida S. Harrington.....	1001
Statistics	1007
List of Sheep Associations.....	1008
Constitution and By-Laws of the Otsego County Sheep Breeders' Associa- tion	1010
Goats' Milk for Infant Feeding, W. H. Jordan and G. A. Smith.....	1012
Breeds of Sheep.....	1019
The Merino, S. M. Cleaver.....	1021
The Rambouillet, C. S. Plumb.....	1027
The Southdown, F. S. Springer.....	1033
The Shropshire, J. C. Duncan.....	1039
The Hampshire, C. A. Tyler.....	1044
The Oxford, W. A. Shafor.....	1053
The Suffolk, C. S. Plumb	1057
The Cheviot, F. E. Dawley	1061
The Dorset, Arthur Danks	1068
The Cotswold, F. W. Harding.....	1072
The Lincoln, Bert Smith.....	1077
The Leicester, A. J. Temple.....	1079
The Tunis, J. N. McPherson.....	1086
The Black-Faced Highland, F. E. Dawley.....	1090
The Karakul, W. M. Rider.....	1094

ILLUSTRATIONS

	PAGE,
Fig. 1. Flock of Hampshires in Pasture.....	874
Fig. 2. Pasture Lands, Showing Practical Sheep Fence.....	898
Fig. 3. Lambs at Pasture.....	901
Fig. 4. Damage Done by Two Dogs in a Single Night.....	905
Fig. 5. Sheep Barn No. 1.....	927
Fig. 6. Interior of Sheep Barn No. 1.....	928
Fig. 7. Plan of Sheep Barn No. 1.....	929
Fig. 8. Floor Plans of Sheep Barn No. 2.....	931
Fig. 9. Sections of Sheep Barn No. 2.....	932
Fig. 10. Sheep Barn No. 3.....	933
Fig. 11. Flat-bottomed Grain Trough.....	934
Fig. 12. Combination Hay Rack and Grain Trough.....	935
Fig. 13. Combination Hay Rack and Grain Trough, the latter remov- able	936
Fig. 14. Sheep Shed for Summer Housing.....	939
Fig. 15. Prize-winning Shropshire Ram at New York State Fair, 1910.	948
Fig. 16. Wool Box, Open and Closed.....	957
Fig. 17. Lath Frame for Handling Carcass.....	963
Fig. 18. Sheep Shearing on the Farm of Jared Van Wagenen, jr.....	973
Fig. 19. An Efficient Superintendent, Levi A. Page.....	985
Fig. 20. Lamb Properly Held for Sticking.....	989
Fig. 21. Method of Fisting.....	992
Fig. 22. Pelt-on Dressed Lambs Ready for Wrapping.....	994
Fig. 23. Pelt-on Dressed Lambs Wrapped and Tagged Ready for Ship- ment	995
Fig. 24. The Finished Carcass.....	997
Fig. 25. Retail Cuts of Mutton.....	998
Fig. 26. Milch Goat	1016
Fig. 27. Merino Ram, Gold Coin, jr.....	1023
Fig. 28. Two Sons of Gold Coin and Their Dam.....	1024
Fig. 29. Rambouillet Ewe	1029
Fig. 30. Yearling Southdown Ram.....	1034
Fig. 31. Champion Southdown Ewe at the Leading Fairs of 1914.....	1037
Fig. 32. Shropshire Shearling Ram.....	1040
Fig. 33. Yearling Hampshire Ewe.....	1047
Fig. 34. Yearling Hampshire Ram.....	1048

	PAGE
Fig. 35. Yearling Hampshire Rams in Pasture.....	1051
Fig. 36. A Typical Oxford Down.....	1054
Fig. 37. Champion Suffolk Ram, New York State Fair, 1910.....	1058
Fig. 38. Cheviot Ram, Byrness Son 7904.....	1062
Fig. 39. Cheviot Lambs	1063
Fig. 40. Group of Cheviot Ewes.....	1065
Fig. 41. Dorset Ram Lambs Six Months Old and Shorn.....	1069
Fig. 42. Dorset Ewe	1070
Fig. 43. Champion Cotswold, New York State Fair.....	1073
Fig. 44. A Typical Lincoln.....	1078
Fig. 45. Border Leicester Yearling Ewe.....	1082
Fig. 46. Tunis Ram, Guilliams' Pride No. 2503.....	1087
Fig. 47. Group of Tunis Ewes.....	1088
Fig. 48. Black Faced Highland.....	1091
Fig. 49. Imported Ram, "Alec", Fur Type.....	1095
Fig. 50. White, Long-wool Ewes with Lambs, sired by Karakul Ram..	1096
Fig. 51. Pure-bred Karakul Ewes and Lambs.....	1097
Fig. 52. Fur Made from Skin of a Half-blood Lamb from a Karakul Sire and a Lincoln Dam.....	1099
Fig. 53. Krimmer Fur, from a Lamb from an Imported Shiraz Ram and a Registered Cheviot Ewe.....	1100
Fig. 54. Fur from a Skin of a Quarter-blood Lamb — Sire, a Half- blood Karakul; Dam, a Registered Cotswold.....	1101

*"The good shepherd tends his fleecy care,
Seeks freshest pasture, and the purest air;
Explores the lost, the wand'ring sheep directs."*

—POPE

INTRODUCTION

It is a source of pleasure to those who, like the writer, have been a friend to and a keeper of sheep, to note the renewed interest in this branch of live stock throughout our state. To increase such interest and supply needed information, this bulletin — fourth in the series of those relating to live stock — has been prepared. I have followed the general plan of those which have preceded it,—setting forth the history of the industry; detailed information as to necessary practices to insure success in the different lines of sheep husbandry; sketches of the different breeds and their peculiar qualifications, with suggestions as to handling both fleece and carcasses.

All the above are always in order for the assistance of those engaged in the industry — and particularly at this time — when men are investing in sheep and are desirous of obtaining accurate knowledge. The Bureau of Farmers' Institutes has had more inquiries for information and literature concerning sheep during the past twelve months than it has in the last five years. A popular movement is always fraught with danger. When the prophet wanted to portray Israel's departure from the path of rectitude, he used the figure, "All we like sheep have gone astray." Human nature has changed little during the centuries, and men, like sheep, are often stampeded to their own hurt. To prevent unwise and unwarranted investment in sheep is a partial intent of this publication. So many alluring pictures are being painted of flocks "in green pastures, beside still waters," securely folded, thriving without the labor of a shepherd, and of the attractive prices now obtaining for wool and mutton, that it is not strange that people are taking up the first four words of the prophet — "All we like sheep" — and not heeding the balance of the sentence.

Too many of the pastures on our hill farms are not always green, and to overstock them with sheep will not be conducive to success. Still waters are excellent for drinking purposes, but very undesirable if they make the pastures wet. Securely folded means better fences than there are on many farms, both to prevent the sheep from straying and to secure them from the depredations of "dogs which are

without." While it is not necessary that the shepherd should go before them, as he did in eastern lands, the man who expects profit from his flock without attention will "die without the sight."

"All is not gold that glitters" — the present extreme prices are the result of abnormal conditions now world-wide. When these pass there will be a decline. For a man with little or no knowledge of sheep to purchase his foundation stock at the price he must now pay is to insure a certain depreciation in his investment when values again become normal, which must be deducted from his profits — if he has any. This is not intended to discourage or belittle the business, but to prevent from engaging in it men who should not do so or who are without experience. By so doing we serve the state as well as by stimulating an important industry.

Meats of all kinds will continue to be high. The same food which will produce a pound of beef on the hoof, worth from eight to ten cents, will produce a pound of butter fat worth forty cents. Where labor is obtainable men will, therefore, produce the latter. The devoting of land to growing crops for stock to feed man is not economy when the land will grow food directly for his consumption. For this reason the large area formerly used in producing beef cattle is being devoted to growing cereals. While cattle can find pasture on many of the cheaper, more remote lands of our state, these lands will not grow corn advantageously, which is most necessary for beef production. Such lands will keep sheep the entire year with a minimum of grain and labor — two serious handicaps to profitable dairy farming. In sheep farming, in addition to the carcass, there is always the wool, which, although a secondary product, is never to be ignored. Therefore, we hail the revival of sheepkeeping.

As in our previous publications, we have gathered together the opinions of experts, that "out of the mouth of [more than] two or three witnesses, every word shall be established."

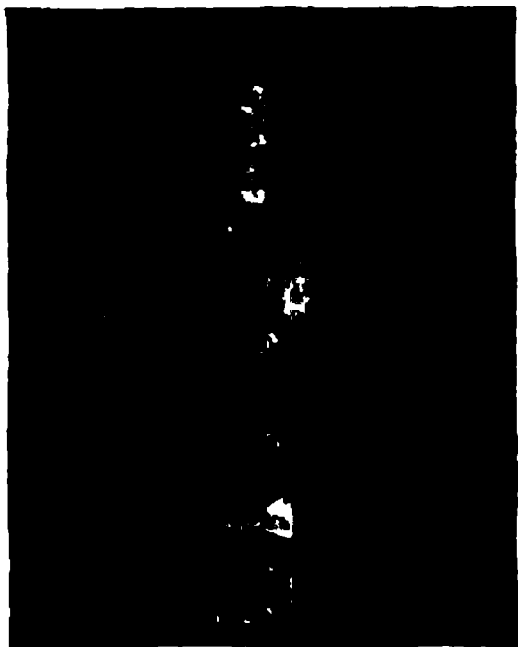
EDWARD VAN ALSTYNE,

Director of Farmers' Institutes.

HISTORY OF SHEEP IN NEW YORK STATE

EDWARD VAN ALSTYNE, Kinderhook, N. Y.

Director of Farmers' Institutes



Sheep, like other livestock, were brought over by the colonists very early in the settlement of the country. That there were fewer of them than of cattle, swine, and horses is apparent from the slight mention made of them in the early records. For this there are several reasons: the first settlers were chiefly Dutch, and the Netherlands, being a low country, is not well adapted to sheep; hence there were few to draw from. However, Samuel Fraser in an article on sheep in the encyclopedia *Americana* says that sheep were brought from Holland to New York in 1625. A copy of an old Dutch document in the royal archives of the Hague, dated 1650, in speaking of New Netherlands says: "Cattle may be had at a very reasonable price; but sheep, which the English [referring to New England] do not sell, are rare." J. R. Brodhead, in his *Colonial History of New York*, says that sheep sold in New Netherlands for twenty to twenty-four florins a head, or between \$8 and \$9.50.

The following statement in *Historie von Europe*, 1675, reads: "Good care having been taken by the West India Company to provide everything for the colony near the May Kanns [Indian name for the river Mauritius (from Prince Maurice) now known as the Hudson] as the country is well adapted to agriculture and raising everything that is provided here [Holland], the aforesaid Lords resolved to take advantage of the circumstances and provide the place with many necessities. The Honorable Pieter Hulst undertook to ship thither 103 head of cattle, stallions, mares, steers, and cows, with all the hogs and sheep that may be thought expedient to send thither, and distributed these in two ships in such a manner that they should be well foddered and attended to, each animal to have its own stall with the floor covered with three feet of sand."

In 1663, Brodhead in his report on the colonies along the Delaware River says: "The settlers have about 110 great bouweries (farms) stocked with about two thousand cows, twenty horses, eighty sheep, and several thousand swine." Undoubtedly the same relative proportion of stock would have been found on Manhattan.

In May, 1666, Peter A. Aldricks, commissary of New York City, was sent to purchase horses, cows, and cattle. He reported that they were not to be had in New Netherlands. He was therefore sent to England and brought back a lot of cows, oxen, and sheep. Later records show that on August 28 of that year the English captured the sloop *Princes* employed by Aldricks to convey his stock from Long Island to Manhattan.

In addition to the scarcity of sheep in their native land, those animals, being less hardy than the other stock, would not endure the long voyage so well, neither would they thrive in the wilderness as would swine or cattle.

THE CHARACTER OF EARLY IMPORTATIONS

The sheep brought over were chiefly of the Merino type, as Spain's relations with Holland had naturally brought sheep from that colony to her one-time province. Later settlers from Great Britain brought of their home flocks, as did those who came from New England. The French habitants of Canada made much of sheep, as the records of the Jesuit relations amply testify. Many of these sheep or their descendants doubtless drifted across the border and formed the foundation of the flocks in the St. Lawrence and Champlain valleys and in that of the upper Hudson — all of which were of a more or less nondescript type, as were all other live stock. It was not until the beginning of the nineteenth century that we had any authentic record of the introduction of pure-bred sheep or of systematic or intelligent breeding.

In the spring of 1802, Robert R. Livingston of Clermont, Columbia County, who was chancellor of the state, 1777–1801, and United States minister to France, 1801–1805, where he negotiated the Louisiana Purchase, and who was associated with Robert Fulton in furthering steamboat navigation, brought to his Columbia County farms two pairs of the French Merino, or Rambouillet sheep.

In 1807, Livingston contributed to the Society for the Promotion of Useful Arts an essay on sheep and woolen manufacture and the advantages of improving the Merino wool by the introduction of Spanish sheep. This was considered so valuable that by an act of the New York legislature in March, 1809, it was ordered that 1,000 copies be printed at state expense. The book was printed by T. C. Hansard, London, England, in April, 1811. It is a volume of 247 pages, beginning with a sketch of the sheep in Europe — much of this from the personal observation of the writer in France and Spain. He speaks of the advantages of pure-breds and gives suggestions as to the management of sheep with a detailed statement of the returns from his own flock. Much of this would be as valuable advice to the New York shepherd of today as it was when it was written, more than a century ago.

In the year of Mr. Livingston's first importation, Colonel Humphreys, aide-de-camp to Washington, and later minister to Spain, brought home with him 21 Merino rams and 30 ewes, which were landed in Derby, Conn. A year previous a Frenchman, M. Delesert, had sent a French Merino ram to Rosendale, near Kingston, Ulster County, which had been mated with a flock of common ewes. Mr. Livingston expressed surprise on his return to this country in 1805 that the advent of these pure-breds had apparently been of little interest to the neighboring farmers. The Rosendale flock of one-half or three-fourths blood had been sold at auction at a price inferior to that of common sheep. Mr. Livingston was able to pick up 24 of these ewes to add to his own flock.

Farmers were evidently not essentially different in their determination not to depart from the beaten paths than are many of the present day. Mr. Livingston's comment on this failure is pertinent. He says: "Such is commonly the case when novelties are introduced in agriculture, till the mind of the husbandman is prepared for their reception. I knew the importance of the object, and I resolved to leave no means unessayed to convince my fellow citizens of it." By 1811, he had increased his own flock to 240 ewes, pure-bred and grade.

Mr. Henry S. Randall, LL. D., also illustrated the apathy existing at an early date when, in 1861, he read a paper before the New York State Agricultural Society in which he spoke of William

Foster of Boston as having brought from Cadiz, Spain, in 1793, two Merino ewes and a ram. Mr. Foster presented these animals to a friend in Cambridge, Mass., who "simply ate them."

In 1809, Mr. Livingston sold his pure-blood Merino wool for \$2 a pound. During the War of 1812 it went to \$2.50. Of the sheep he says: "I have gradually added to the size of the progeny. I have now full-blood Merinos at Clermont that are larger than the common sheep of the country, and my one-half and three-quarter wethers, when stripped of their coats, are larger and much handsomer than most of our native flocks." Of the wool he says, "The difference of profit between the half-breed and the common sheep, at my last shearing, was nine shillings and three pence per head."

Evidently these facts came to be appreciated by his neighbors, for he writes: "All the full-bred rams of the Clermont stock were bespoken before the first of January at £33 15s., and £225 has been refused for a ram lamb ten months old, and £45 for his brother dropped at Christmas, and only three weeks old when the offer was made by an enlightened farmer from Massachusetts. What is all farming but an advance made with a view to future profit? No one refuses to sow wheat because the seed is dearer than rye."

In 1801 M. Dupont de Nemours had four Merino ram lambs shipped to America, three of which died at sea. The other, Don Carlos, was taken to Dupont's farm along the Hudson River, where he was used for nearly four years.

In 1809-10 Wm. Jarvis of Vermont, United States Consul at Lisbon, Portugal, shipped at different times a total of about 4,000 Spanish Merinos, of which 1,500 came to New York. During the latter year an auction of 215 Paular Merinos took place at the country home of F. B. Winthrop, Horne's Neck, New York, the receipts at which amounted to \$57,000, an average of \$265 each.

One of the pioneers who improved the Merino stock was Andrew Cock, Flushing, L. I., a breeder from 1811 to 1823.

Saxon Merino

In 1824 there were brought to this country a number of Saxon sheep, part of which were sold at auction in Brooklyn. Many of these sheep were not pure-bred, and none of them were suited to **this**

country. In 1836 another lot was imported, of about the same character as those previously brought in. The increased tariff of 1828 so favorably impressed the farmers that they became over-enthusiastic and made costly preparations for growing wool, purchasing Saxon sheep at from \$100 to \$500 a head. The Saxon wool was really not 10 cents a pound higher than that of the Spanish Merino, and the total product of the latter was worth more in the market than that of the former. When the Saxon sheep disappeared, the improved Spanish Merino again came into general favor.

Rambouillet

In the early forties, the French Merinos, which were later known by the name of Rambouillet, began to attract considerable attention. They were from one-tenth to one-fifth larger in carcass than the American Merinos. Mr. Arthur B. Allen, editor of the *American Agriculturist*, was a warm admirer of them and did much to bring them into notice. Mr. John D. Patterson, of Westfield, Chautauqua County, and Mr. F. M. Rotch, of Morris, Otsego County, were both prominent breeders. We find Mr. F. D. Gage, of De Ruyter, Madison County, breeding these sheep from 1852 to 1861, many of those being purchased by him from the above-named gentlemen and Mr. John A. Taintor of Hartford, Connecticut.

German or Silesian Merino

The German breeding of the Rambouillets was introduced into New York State by Mr. W. G. Markham, of Avon, in 1882, when he received a gift of a ram and two ewes from Von Homeyer, the greatest German improver of this breed.

From 1851–1856 we find Mr. Wm. Chamberlain, of Barrytown, Dutchess County, importing the Silesian Merino. They were descendants of the Spanish sheep, but of extremely fine fleece. In a letter written in 1862, Mr. Chamberlain says they found them hardy but they did not shear quite so heavy as the Spanish.

The New York Merino Sheep Breeders' Association was organized in 1879, three years before the organization of the National Record of the American Merino Sheep Register.

The Merinos were preeminently the sheep of New York until after the Civil War, when a change of fashion from broadcloth to

worsted garments made a better demand for the coarser wool sheep. The enhanced price and greater demand for mutton also helped to make the change to the mutton breeds. These were often not so well adapted to many of the hill farms as the Merinos.

Southdown

In 1803 Dr. Rose, of Fayette, Seneca County, is said to have commenced with a small flock of Southdowns, which did remarkably well. In 1823 Sidney Hawes, of New York, imported some Southdowns and sold 36 ewes, 2 rams, and 10 wethers to C. N. Bement, of Albany, who kept up his flock many years.

In 1834 Francis Rotch, of Otsego County, imported six ewes and a ram. Following this, he made several other importations from the most noted English flocks.

In early days higher prices were paid for Southdowns in America than now. In 1856 at the sale of L. J. Morris, at Fordham, New York, the ewes averaged \$150 and one imported ram brought \$400.

Leicester

During the War of 1812 Christopher Dunn brought the first pure-bred flock of the Leicester breed into New York, near Albany. These were destined for Canada but were captured by an American privateer. There were importations to New York in 1826 by Mr. J. S. Skinner; in 1831 by D. Stockdale; and in 1835 by John Baker.

Tunis

In 1825 some thirteen Tunis sheep were imported into New York, and a pair of these was sent to General Van Rensselaer of Albany. From the early stock a few flocks were established in South Carolina. They were nearly exterminated by the Civil War, and did not receive much attention until within the last twenty years. The most important flocks are in Indiana and Ohio.

Cotswold

The introduction of Cotswolds to the United States probably first occurred in 1832 when Mr. C. Dunn, who lived near Albany, imported a ram. In 1840 W. H. Sotham imported a flock of

nineteen to New York, near Albany, for which he paid \$110 each. This same year Erastus Corning and Mr. Sotham made two large importations of a cross-bred Cotswold-New Leicester from the Hower flock at North Leach, Gloucester. In 1836 J. C. Haviland, of Dutchess County, began breeding Cotswolds and retained his flock for many years.

Cheviot

In 1838, Robert Ycungs of Delhi, Delaware County, brought the first Cheviots to the United States. They had, however, previously been imported into Canada. Further importations were made in 1842 by George Lough and a Mr. Davidson of Delaware County.

Hampshire Down

The introduction of the Hampshire Downs of the Merino type to America probably first occurred in 1855, when Thomas Messenger of Great Neck, L. I., imported a small flock. However, little else was done to introduce additional Hampshires prior to 1880. The following year Henry Metcalf of Canandaigua, imported a ram, "Shepherd's Pride 2nd."

About 1890 the Hampshires met with favor in the early lamb market of America, largely due to the importations and popularizing methods of James Wood, of New York—one of the best American authorities on the breed.

Shropshire

The introduction of the Shropshire sheep to America is comparatively recent, the first flock being imported into Maryland in 1860. A. B. Conger, of Haverstraw, New York, had a flock at about the same time.

Shropshires were exhibited at the New York State Fair at Elmira in 1861. P. L. Lorillard of Fordham had a flock in 1862, and six years later L. C. Fisher of Otsego County began breeding these sheep.

Black Faced Highland

The introduction of the Black Faced Highland to America first occurred in June, 1861. Hugh Brodie imported one ram and two ewes for Brodie & Campbell, New York Mills. In 1867 this

flock and its increase was purchased by T. L. Harison of Morley, St. Lawrence County. Isaac Stickney of New York also imported a small flock at about 1867 for his farm in Illinois. Other than these, very few of these sheep have ever been brought in America.

Dorset

The first Dorsets owned in this country were purchased in March, 1887, by William Daley of Lockport, from Valancey E. Fuller of Canada. During the following month of June, Aden Thayer of Hoosick Falls imported twelve head. This same year Woodward and Jaques of Lockport made further importations.

Suffolk Down

One of the first breeders to introduce Suffolk Down sheep to America was Mr. M. B. Streeter of Brooklyn, who made an importation of prize-winning stock in 1888.

DECLINE OF THE INDUSTRY

About 1880, a decline took place in the number of sheep. A number of factors contributed to this, among which was a lack of knowledge of the demand for the mutton sheep, the decline in the price of wool, and the damages from dogs, which last factor increased as the country became more thickly populated. However, dogs have always been a deterrent to sheepkeeping. We find in 1726 that Governor Burnett, in writing to the Lords of Trade, refers to an act encouraging the return of cattle and sheep to their owners. In 1739 Governor Montgomery mentions an act to prevent the destruction of sheep by dogs in the river counties and on Long Island. In 1740 Governor Clark refers to a similar act. Certainly our legislature of 1917 had good examples set them by their ancient predecessors.

The deterioration of farm fences, brought about by the scarcity and high price of lumber, was another reason for men selling their sheep. Contemporary with these things was the apparent need of more manure to meet the demands of an increased system of cropping on New York farms. This, with the better transportation facilities and the increased demand for dairy products, made the farmer very willing to go with the multitude into dairying, to whom were depicted the advantages of the business, too often by promoters that were

interested to sell supplies. This decline continued, the federal census of 1910 showing only 606,119 sheep in the state. In 1916, for the first time in many years, we find the number of sheep increasing—due to the scarcity of labor, the small profit in dairying, and the increasingly high price of wool and mutton. The following figures are taken from the U. S. Census reports:

Year	Total number sheep	Pounds wool	Value of wool
1910	606,119	4,235,707	\$1,163,846
1900	984,516	6,674,165	1,387,969
1890	1,528,979	6,715,686	.....
1880	1,715,180	8,827,195	.....
1870	2,181,578	10,599,225	.....
1860	2,617,855	9,454,474	.....
1850	3,453,241	10,071,301	.....

WOOLEN INDUSTRY AND WOOL PRICES

No history of sheep would be complete without some reference to this industry. From the very early settlements, a few sheep were a necessity in every community and on every farm, for from their fleece was made the family clothing. The carding machine and the hand loom were necessary parts of the household equipment in every farm home. Solomon's description of a virtuous woman — "She seeketh wool and worketh willingly with her hands; she layeth her hand to the spindle and her hand holds a distaff" — might have been written of the farm woman of our state well toward the middle of the nineteenth century, as she was adept at transforming the wool from the backs of the sheep into clothing for the backs of her household as well as into stockings for their feet. The writer remembers seeing the yarn made for the latter purpose and has worn the blue woollen stockings made therefrom. There developed a class of local women who went from farm to farm as spinners and weavers. In the work of Robert R. Livingston, to which reference has been made, he speaks of 1 pound and 4 ounces of his Merino wool being made into a yard of first-class broadcloth by common country spinners and weavers, and states that the family of his brother, Edward P. Livingston, had made $32\frac{1}{2}$ yards $25\frac{1}{2}$ inches wide from $16\frac{3}{4}$

pounds of wool. In addition to this, small woolen mills sprang up along many of the streams early in the eighteenth century. Most of these, however, were abandoned prior to or during the early seventies. Lord Cornbury, writing to the Lords of Trade at Fort George in the beginning of the eighteenth century, says, referring to woolen manufactories, "They are already so far advanced in their manufactures that three-fourths of ye woolen they use is made amongst 'em, especially the coarser sorts."

It is interesting to note that monopolies were not confined to the twentieth century, for in 1709 the Lords of Trade in plans for settling the Palatines suggested that the Governor be directed to grant under seal of the province, without fee or reward, 40 acres per head to each family, "such grant to be void if grantee shall apply himself to making of woolen or such like manufactures." A further report to the Lord High Treasurer of Great Britain says: "The province of New York being under her Majesty's immediate government, such mischievous practices as woolen manufactures may be discouraged and chequed. As further provision against any such practice, a clause may be inserted in several patents so as to be passed to said Palatines bearing the same void if such patentee shall apply himself to the working of woolen or such like manufactures."

About this time, Lord Cornbury also wrote: "As for woolen, I think they have brought that to great perfection; they already make very good serges and linsey-woolseys, and in some places they begin to make coarse cloth. They will so far improve in that as not to want the assistance of England to clothe themselves, and that may be of advantage to England." In 1767, Governor Moore wrote to the Lords of Trade: "There is general manufacture of woolen carried on here and consists of two sorts — the first a coarse cloth entirely woolen, three-quarters of a yard wide, and the other a stuff which they call linsey-woolsey. The warp is linen and the woof woolen, and a very small quantity is ever sent to market. Last year, on the passage of the Stamp Act, those that were desirous of distinguishing themselves as American patriots, would wear nothing else."

By an act of the state legislature, passed April 8, 1808, premiums of \$150, \$75, and \$50 were offered for "the best specimens of woolen cloth, of uniform texture and quality," "of a breadth of

not less than three-quarters of a yard," manufactured within the state; a premium of \$80 to the best specimen manufactured in a family in each county of the state; and premiums the same as in the first instance to the three best of county domestic specimens in the whole state. To obtain the \$150 premium the specimens of cloth were required to equal 200 yards, the second 150 yards, and the third 100 yards; the county specimens were to equal 30 yards. The three first premiums, and those for the three best county specimens, were awarded by the Society for the Promotion of Useful Arts — the county specimens by a majority of the judges of the Court of Common Pleas. This law was amended in 1810 and 1812. By these amendments the two principal state premiums were paid only for broadcloth. In the years following 1809 there were paid out annually from \$2,770 to \$4,095. After 1815 this law was not renewed. In 1819 the State Board of Agriculture* was formed and divided \$10,000 among the counties to be paid out in various kinds of agricultural premiums, etc.

As a specimen of the manufacturing industry of those days, we find by the census of 1810 that the following fabrics were manufactured in New York: woolen goods made in families, 3,257,812 yards with a value of \$2,850,585. There were 33,069 looms, 413 carding machines, 427 fulling mills — probably not a woolen manufactory as a whole in the state.

The revulsion from war to peace prices after 1815 so affected the sheep industry that Merinos, which were valued at \$1,000 a head in 1809, sold for \$1 a head in 1815. In spite of a tariff law in 1816 which imposed a duty of 15 per cent, ad valorem, on wool, and 25 per cent, ad valorem, on woolen manufactures, the Merino sheep continued without any considerable market value until 1824. They had become almost completely lost to public notice, and of many choice flocks no trace was ever afterward found. The tariffs of 1824 and 1825 afforded a decided protection to wool, and the farmers again turned their attention to the production of that staple.

The price of fine wool did not rise until the close of 1830. There were further reductions of the tariff in 1842 and 1846. Under the operations of that of the latter year, many of the principal woolen manufactories in the United States failed, and the manufacture of

* This is now known as the State Agricultural Society.

broadcloth was entirely broken up. The tariff of 1857 made all wools costing 20 cents or less free and lowered the duty of all other wools to 24 per cent, ad valorem. In 1861 the tariff was increased.

From the beginning of 1827, until the close of 1861 — a period of 35 years — the average price of fine wool was 50.3 cents; of medium, 42.8 cents; of coarse, 33.5 cents.

In 1825, fine wool sold for 70 cents a pound. Between July, 1864, and the following spring, wool sold for \$1. Little or no attention was paid to the carcass. Beginning with 1875, the price of wool for the next twelve years averaged 41 cents. After 1887 it rapidly declined, until 1894 the writer sold a two years' clip for 11 cents. This decline was brought about by tariff changes, transcontinental railroads, and importations from South America and South Africa, from which countries were received annually about 50 million dollars' worth of manufactured woolen goods.

FENCING AND PASTURE FOR SHEEP

EDWARD VAN ALSTYNE, Kinderhook, N. Y.

Director of Farmers' Institutes

A most important factor in sheepkeeping is fencing. It is folly to go into the sheep business unless the pastures where they are to run are suitably fenced. This fact is ignored or lost sight of by many of those who are very enthusiastic for the return of sheep to our New York State farms. Adequate fencing not only costs money but takes time.

TYPES OF FENCES

The stone walls, except they were in good condition, were never very satisfactory sheep fences. In their present generally dilapidated state, they are little, if any, better than no fences; and only the wealthy can afford to rebuild them. The post and board fence was, and is, excellent when in good condition; but, owing to the price of lumber, it is usually out of the question to build such fences today, and most of those remaining are no longer fit to turn any stock. The old rail fences were usually satisfactory, but they, too, are passing, and the condition of most of those remaining is such as to invite stock to seek pasture on the other side. Barbed wire, which, during the last two decades, has come to be the farm fence, has never fulfilled what was expected of it, as usually put up. It is easily broken through, and many is the valuable horse or cow that it has injured or ruined. For sheep it is little more than a trap or a wool-catcher.

The best and only satisfactory moderate-priced fence is of woven wire with posts not to exceed 12 feet apart. If the posts are farther apart, the wire will become slack and the sheep will crawl under. Whenever the land will permit, a furrow should be turned toward the fence on either side at the bottom so that the lower wire is close to the ground and the water is carried away. A properly constructed fence of this kind, with a barbed wire at the top, will not only keep the sheep in, but the dogs out. It is one of the best safeguards against dogs that I know of.

After full discussion of this subject by practical men at two meetings of the Otsego County Sheep Breeders' Association, the following decision was arrived at and fences were ordered accordingly:

Fences should be of No. 9 wire throughout, with stays six inches apart for small fields and enclosures, or twelve inches apart for large fields, having eight strands spaced in inches beginning at the bottom, as follows: $3\frac{1}{2}$, $4\frac{1}{2}$, 5, 6, 6, 8, and 8, or 40 inches in height; one barbed wire to be strung on the posts six inches above the woven wire and another at the bottom. This applies especially to small fields and enclosures.

Not infrequently such fences attract the lightning and stock close to them are often killed. This danger may be avoided if — say once in 75 or 100 feet — a wire is run from the top of the fence 3 or 4 feet into the ground or where it will strike water.

POOR FEED AND FENCES MAKE UNRULY SHEEP

Nothing will tend more to make sheep wanderers than poor pasture. I have known a flock to run contented for half the summer with the fences none too good until drought and overstocking made insufficient pasture, when, impelled by hunger, the sheep sought feed elsewhere. After an outlet was found and their appetites satisfied, no ordinary fence would hold them, and a bad habit thus formed became a permanent one. I consider a flock of sheep more injurious to growing crops than cattle, as sheep usually go in mass and break down what they pass over as does a cyclone; and forty or fifty mouths each nipping the corn or other plant will, in a short time, destroy the work of weeks.

NOT ALL CHEAP LANDS ARE SUITABLE FOR SHEEP FARMING

This, naturally, brings me to the second part of my subject — pasture. There is an old saying that "Where the ox will starve, sheep will thrive" — another dangerous half-truth. The sheep is a natural scavenger and delights to wander far afield, browsing on a great variety of plants that the lethargic bovine would never find or would disdain. The sheep dislike rank herbage and prefer to feed close to the ground. Nevertheless, to expect them to thrive on pasture — however extensive — where there is little but moss on the elevations and only swamp grass in the hollows, is to expect the

impossible. That this is the condition of many of the pastures on the much-vaunted so-called cheap lands does not seem to be generally understood. Sometimes these lands are naturally light and shallow; sometimes, because they have been overstocked or neglected, where good grasses should be growing the land is occupied by brakes and weeds. This may seem pessimistic, but "Pity 'tis, 'tis true." If this fact is realized, the serious mistake of putting sheep in large numbers on such land will be avoided.

It must be remembered that a man who has been misled and in consequence failed to receive what he expected, or one who has suffered financial loss, becomes a factor in the community opposed to progress of every kind.

UNWISE TO OVERSTOCK

It is always a mistake to overstock — better a moderate number of sheep well fed than a large number just existing. The profit is always on the growth over maintenance. One acre of good rich land will keep twice the sheep that may be kept on some of the uplands. However, the latter — if properly fenced — can be profitably pastured with sheep, if no more are kept than the pasture will abundantly feed; for such lands cannot usually be cropped with profit, while rich lands can.

SHEEP AS SCAVENGERS

As intimated, sheep are valuable as weed destroyers, but they must have nutritious grasses as well. If rank weeds are mowed off, sheep will much more readily subdue them. Frequently, the pasture can be materially improved by sowing a mixture of pasture grasses in the early spring or late in August.*

THREE ESSENTIALS

Three things in addition to the avoidance of overstocking will do much to maintain and improve the sheep pasture.

1. Do not turn them out too early in the spring. At that time the grass has little nutriment, and sheep depending on it will lose flesh. In order to obtain enough to eat they must feed very close, and many grass plants will never grow again. The ground being

* See Bulletin 87—Grasses and Leguminous Crops in New York State, pp. 2806 and 2971

FIG. 3.—SHEEP AT PASTURE

soft, the roots are often pulled up or broken off. It is not economy of feed to turn in pasture before the ground is solid and the grass has obtained strength.

2. Divide the pasture into two parts, alternating every week or ten days. A very inexpensive fence will do this. At least one-fourth more feed will be obtained from the same area by this method. The plant roots have a chance to develop, which is essential to the maintenance of a good pasture. The feed is fresh and, in consequence, will be much more relished.

Sheep will foul a pasture more than other stock. For that reason it is always undesirable that they be allowed to run with cattle. It is all right for the sheep, but bad for the cows. It is often a good thing to turn the sheep into the cow pasture for a time after the cows are taken out, as they will eat many weeds left by the latter.

3. Refrain from pasturing too late in the fall. After repeated frosts, there is very little nourishment in the grass. Sheep may be filled, but they will not be fed. Close cropping after the season's growth has passed will quickly ruin the stand of grass. In August, dwarf Essex rape or rye may be sown, on which the sheep may pasture well into the winter.

DANGER FROM BLOAT FROM GREEN CROPS

Care should always be exercised in turning sheep, when they are hungry, on clover, rape, or rye, particularly if it is wet. These ferment in the stomach and bloating follows, which, unless relieved, is usually a cause of death. It is wise to put sheep on feed of the above character only after they have partially satisfied their appetites on short pasture or hay, and then only when the feed is dry. When bloating takes place, relief may be given by puncturing the paunch from the left side — facing toward the head — about two-thirds of the distance diagonally between the hip bone and first rib; then insert a tube to permit the escape of gas. Or, give ball of pine tar about the size of a marble.

WATER, SHADE, AND PROTECTION AGAINST PARASITES

A good pasture should have water, preferably from a running stream. Sheep will live on dew, but they will not thrive. If the water is in a standing pool, it is essential that the ground about it should be dry, for wet ground is productive of foot rot.

Shade is another essential. If there are no trees, a cheap, open shed should be provided — one that can be easily moved before the ground becomes dirty. The droppings can then be left on the parts of the field needing them most.

The eggs of the stomach worm from the voidings of the old sheep readily adhere to the rank grasses in shady places. Lambs eating these grasses become affected. It will be of material help if the grass in such places be cut off with a scythe — not a long or expensive operation.

It will always pay to have in the pasture a box, covered on one side, into which the sheep can thrust their heads and obtain salt at will. With the salt should be mixed one-fourth of the amount of tobacco stems. Each sheep will then obtain the necessary amount of salt, and they will be kept free from stomach worm.

If a smooth pole is placed just above the opening of the salt box and, during August, is smeared with tar once a week, the sheep's noses will be also smeared. This will prevent the entrance of the fly that lays the egg causing grub in the head.

Frequently, the wild cherry grows along the fences. If these are cut and the leaves and branches left to wilt, they will probably be eaten by the sheep, with fatal results; for the wilted leaves develop prussic acid — a deadly poison.

All the above should indicate that, in order to succeed with sheep, one must familiarize himself with all their requirements — that something more is necessary than the purchase of stock and turning them adrift on more or less barren hillsides.

THE SHEEP INDUSTRY, DAMAGE BY DOGS, AND THE REMEDY

D. P. WITTER, Berkshire, N. Y.

Farmers' Institute Lecturer and Member of Assembly

The sheep industry has been under consideration in this country during the past year as never before. As an economic question we can scarcely find one more vital to the welfare of all the people.

President Schurman of Cornell University said in an address before the State Agricultural Society at the last annual meeting, "In case of war in this country, the great problem will not be one of men, but of food and clothing." This statement has been proven true already. The great scarcity of food and the consequent high price brings the statement home to each of us with much emphasis.

Since we have had any knowledge of the human race, sheep have played an important part in furnishing food and clothing for man, the wool and skin being especially valuable for the latter.

The number of sheep kept is annually on the decrease and is a matter of great concern to statesman the world over, but especially is this true in the United States. As a nation we buy annually more wool than we produce. There are less than fifty million sheep in the United States — a decrease of about 25 per cent in the past six years.

In an effort to restore such a valuable industry that has been lost to the people we should seek earnestly the cause or causes for its departure, and if we can discover the reasons why the flocks have left the country we will have gone a long way towards finding a remedy for the loss.

We should always remember that it is more difficult to reestablish a lost industry than it is to safeguard and keep it, and nothing short of drastic measures will give farmers the assurance they need to induce them again to start in sheep raising.

FIG. 4. FIFTY SHEEP KILLED IN ONE NIGHT BY TWO DOGS.

One rather serious drawback is the fact that many of the young farmers have never had experience with sheep and must learn the art by study and experience, which is sometimes expensive.

I believe it is an acknowledged fact that the low price of mutton and wool twenty years ago did much to discourage the farmer in sheep husbandry; but that condition no longer exists, and we may be quite certain that low prices of either wool or mutton will not prevail again for many years, if ever.

Economic conditions will do their share to induce farmers to engage in the business again. If the business has become profitable and farmers can learn how to care for their flocks, we have but one main hindrance to a full restoration, and that is the injury and losses caused by dogs. Dogs seem to be the most serious menace to the sheep industry at present. In fact, it is very doubtful if farmers will ever engage in the business again unless full protection is given them by a law that will give assurance that they can keep sheep in reasonable safety from destruction.

The following table furnished by C. W. Larmon, statistician, State Department of Agriculture, Albany, N. Y., gives at least a partial list of damage done to sheep by dogs in this state during the year 1916.

TABLE I
SHEEP VERSUS DOGS, 1916

COUNTY	NUMBER SHEEP	NUMBER DOGS	NUMBER SHEEP KILLED OR INJURED	AMOUNT PAID FOR DAMAGES
Albany.....	9,354	6,855	46	\$426 40
Allegany.....	11,393	2,848	145	896 11
Broome.....	5,473	4,611	195	982 50
Cattaraugus.....	4,435	3,980	122	894 00
Cayuga.....	9,527	3,507	153	722 36
Chautauqua.....	5,626	6,574	57	488 50
Chemung.....	4,141	1,260	73	460 50
Chenango.....	3,118	3,393	127	1,529 21
Clinton.....	8,145	2,410	83	441 50
Columbia.....	10,486	2,962	257	2,336 70
*Cortland.....	1,970	2,078	6	64 50
Delaware.....	3,922	4,222	79	550 00
Dutchess.....	7,510	4,327	113	1,535 00
*Erie.....	4,058	17,302	52	423 50
Essex.....	12,164	1,874	209	900 50
Franklin.....	3,245	2,405	94	513 75
Fulton.....	843	2,413	14	109 00
Genesee.....	29,646	2,150	198	1,548 50
Greene.....	5,343	2,064	120	588 60
*Hamilton.....	1,607	288	4	21 45
Herkimer.....	1,259	4,650	36	295 00
Jefferson.....	5,496	3,870	41	285 50
Lewis.....	1,893	2,116	24	172 00
Livingston.....	32,339	2,332	329	3,737 50
Madison.....	2,728	2,513	42	367 00
Monroe.....	11,557	3,042	146	769 44
Montgomery.....	1,399	2,382	38	177 00
*Nassau.....	372	2,000	.....	.....
Niagara.....	11,321	5,477	119	641 50
Oneida.....	4,819	7,507	26	177 00
Onondaga.....	7,930	7,374	257	1,627 21
Ontario.....	35,180	2,717	347	3,857 75
Orange.....	1,578	4,901	56	298 00
Orleans.....	32,989	1,503	152	1,499 50
Oswego.....	3,078	3,868	81	792 80
Otsego.....	8,249	4,072	114	812 00
*Putnam.....	591	883	.....	.....
Rensselaer.....	10,565	5,297	79	982 50
*Rockland.....	499	750	.....	.....
St. Lawrence.....	10,360	5,730	274	2,061 75
Saratoga.....	5,960	3,828	34	348 00
*Schenectady.....	1,479	3,053	4	29 50
Schoharie.....	5,404	1,925	52	391 00
Schuyler.....	14,707	1,088	29	234 75
Seneca.....	6,433	1,161	125	1,280 70
Steuben.....	29,208	4,354	341	2,807 50
*Suffolk.....	3,893	3,512	9	72 50
Sullivan.....	1,215	4,392	20	269 00
Tioga.....	5,868	1,464	190	1,311 50
Tompkins.....	10,320	2,196	148	903 00
Ulster.....	3,997	5,083	62	421 50
Warren.....	8,298	1,576	19	77 50
Washington.....	17,305	2,602	237	1,565 50
Wayne.....	10,897	3,554	88	1,070 50
Westchester.....	1,558	9,272	13	116 00
Wyoming.....	16,659	2,100	60	726 50
Yates.....	25,001	1,106	78	522 00
†.....	.....	50,693	.....	.....
Total.....	494,410	252,966	5,816	\$46,132 98

* Indicates report incomplete.

† Town clerks estimate that at least 25 per cent of dogs are missed by assessors.
On basis of present sheep value, the damage would amount to \$87,240.

It must be remembered, however, that the damages allowed are only part of the loss actually sustained, and if the owners were paid in full for damages, that would not restore the industry. The indications from the above table are that there were at least 6,000 sheep killed by dogs in this state in 1916, with a total loss to owners of \$100,000, to say nothing about the loss of the industry and the consequent higher prices of food and clothing, which affects the interests of everyone.

While the number of sheep have been on the decrease for many years, yet the loss from dogs seems to show an increase, rather than otherwise.

The following table shows that the damage to sheep by dogs in 1916 in Ontario County was nearly one thousand dollars more than any other year for seventeen years, and more than twice as much as the average loss per year for the sixteen years previous. The percentage of sheep killed by dogs has been on the increase. This fact makes restoration of the industry the more difficult and discouraging.

TABLE II

LOSSES PAID TO ONTARIO COUNTY BREEDERS FOR SHEEP DESTROYED BY DOGS

Blank spaces indicate either years of no loss or years in which the exact figures were not available.

Towns	1900	1901	1902	1903	1904	1905	1906	1907	1908
Bristol.....	\$45 00	\$24 00	\$23 00	\$23 00	.....	\$7 00	\$26 75	\$164 00	\$606 00
Canadice.....	115 00	16 00	29 50	38 00	\$17 00	45 00	.....	.....	42 25
Canandaigua.....	113 00	705 25	148 00	651 00	543 50	170 00	362 50	475 00	621 50
East Bloomfield..	280 00	.....	.....	.....	.....	79 00	359 00	.....	340 00
Farmington.....	74 00	145 00	87 00	19 00	73 00	9 00	78 50	162 50	41 50
Geneva.....	.....	56 00	.....	19 00	.....	29 00	118 50	.....	.....
Gorham.....	.....	367 00	.....	153 00	.....	.....	.....	.....	24 00
Hopewell.....	93 00	50 00	123 00	19 00	.....	.....	.....	14 00	115 00
Manchester.....	92 50	.....	43 00	56 00	203 50	61 00	.....	393 00	235 00
Naples.....	184 00	218 75	.....	.....	.....	.....	.....	.....	.....
Phelps.....	34 00	49 00	58 00	111 00	.....	48 00	.....	.....	.....
Richmond.....	72 00	175 50	170 50	83 00	42 00	44 00	.....	27 00	50 50
Seneca.....	109 00	139 00	242 00	163 00	28 00	102 00	.....	240 00	153 00
South Bristol....	.....	.....	73 75	78 25	14 00	.....	.....	269 00	56 50
Victor.....	158 00	71 00	553 50	73 00	265 00	.....	.....	456 00	475 00
West Bloomfield..	108 00	.....	3 00	189 75	40 00	42 50	.....	238 00	72 00
Total.....	\$1,477 50	\$2,016 50	\$1,554 35	\$1,676 00	\$1,226 00	\$636 50	\$945 25	\$2,438 50	\$2,832 25

Towns	1909	1910	1911	1912	1913	1914	1915	1916
Bristol.....	\$116 00	\$20 00	\$83 00	\$53 00	.....	\$126 00	\$77 00	\$163 00
Canadice.....	.....	55 00	107 00	.....	\$71 50	17 00	54 00	138 00
Canandaigua.....	51 00	76 50	468 75	135 00	177 00	96 00	443 00	247 00
East Bloomfield.....	.....	.....	158 00	324 50	.....	.....	61 00	68 00
Farmington.....	220 50	338 00	336 50	124 50	278 00	28 00	192 00	718 00
Geneva.....	.....	.....	.....	36 00	.....	.....	81 00	108 00
Gorham.....	258 00	91 50	48 00	.....	177 00	49 00	49 00	197 00
Hopewell.....	.....	.....	.....	.....	.....	.....	.....	333 00
Manchester.....	87 00	39 00	760 00	153 00	147 00	82 00	.....	147 00
Naples.....	30 00	.....	.....	.....	114 00	.....	.....	.....
Phelps.....	140 00	291 25	197 00	17 00	188 00	142 00	.....	51 50
Richmond.....	280 50	88 83	109 00	.....	94 00	68 00	8 00	55 00
Seneca.....	61 00	.....	39 00	23 00	43 00	.....	.....	56 00
South Bristol....	33 00	9 00	224 00	152 00	200 00	151 00	11 00	982 50
Victor.....	306 00	9 75	21 00	224 00	280 00	344 00	.....	452 00
West Bloomfield	19 00	83 00	66 50	141 00	361 00	.....	.....	108 00
Total.....	\$1,552 00	\$1,101 83	\$2,647 75	\$1,383 00	\$2,130 50	\$1,103 00	\$976 00	\$3,824 00
Total for 17 years.....							\$29,530 83	

Several states have passed laws for the protection of sheep, Virginia perhaps having the most drastic law of any of them. In that state since 1914 it has been unlawful for a dog to go off of his owner's premises unattended. Such a law lived up to would eliminate the loss and restore the industry under present economic conditions.

The above restriction is the only logical way to stop the loss; but we have permitted dogs free range since this country was settled, and a measure so drastic would probably meet with much opposition and would not be enforced. It is said this is the only civilized country in the world that permits dogs to run at large unattended. In time it will probably become unlawful here. It is not reasonable nor fair that one man should be permitted to keep an animal under circumstances which would make it practically impossible for a neighbor to keep so innocent and quiet an animal as a sheep, yet such is the case in this country today.

To remedy the evil here the license system has been resorted to, and at present may be our best means of overcoming the difficulty, but it seems to me the only value to come from such a law is that it will reduce the number of dogs to some extent — and perhaps the most dangerous class, that is, the ownerless dogs.

Well-bred and well-fed dogs have been known to kill sheep, and when dogs start out on their errand of destruction they care but little whether their owner has paid a license of two dollars or more

on them for a year or not. They enter the chase just as eagerly in one case as the other. I am persuaded, therefore, that we shall never have a law that will accomplish all the desired results until dogs are kept on the owners' premises at least nights during the grazing season. Much damage has been done in winter when sheep were enclosed in yards or barns, which seems to prove that dogs should be restrained, or in the care of a competent person at all times.

Our people are not yet ready for such a law, but it will doubtless come in time. It certainly must if sheep husbandry is to become, as it should, one of our leading industries.

It has been contended by some that bells are a great measure of protection to sheep, but experience proves that theory to be nearly worthless. I have known serious damage among sheep by dogs where a large percentage of the sheep wore bells. In a few cases they may be heard by some one and the chasing stopped, but they do not prevent dogs from chasing sheep unless the bells are heard and the dogs killed or driven off.

Fencing against dogs has also been suggested, but that is no certain protection. Dogs have dug under fences around fields and yards, and even under doors or sidings of sheds or barns where sheep were confined, and the whole flock destroyed in a night. When dogs take on the wolf nature and are allowed to run at large, they will in some way get at sheep, if any are to be found, and destroy them.

The law enacted during the last session of the legislature (1917) is not a perfect law and should be amended in certain particulars. Any restriction on dogs is sure to meet with opposition from hunters, dog fanciers, and humane societies. With the large number of cities in this state, it becomes more difficult to pass a fair law to protect sheep than in states where agriculture is the leading industry. In this state farmers get what they can, or what the few real representatives they have in the legislature are able to secure for them, which in many instances is but little.

The bill passed this year is statewide in its application, with the exception of New York City. While it may be argued that a dog law should be statewide and apply to all localities alike, yet conditions in large cities and in the country are different; therefore, first and second class cities may well have a law which will apply

to them, and third class cities and towns a law which will meet their conditions.

If such a bill had come before the legislature, the strenuous opposition with which the Wicks bill met from the large cities would have been eliminated, and a better law for third class cities and towns could have been enacted.

It must be conceded at once that no law is of any value unless it is enforced, and every interested person should see to it that the present law is obeyed.

One good feature of the new law is that it has a strong state department back of its enforcement, and the commissioner of agriculture may order that dogs be restrained on the owners' premises from sunset to one hour after sunrise, from May first to November first. Such an order may be found necessary later. If such be the case, the sheep owner may consider his flock fairly secure from attacks by dogs.

It is not expected that all farmers will ever want to engage in sheep husbandry — in fact, such a course would be very unwise; but the law should be such that if a person wishes to keep sheep he may do so safely. There are thousands of acres of hill land in New York State far removed from market, where sheep husbandry should be the leading industry; and the policy of the state should be to make it possible for farmers so situated and desirous of engaging in the business again to do so, with reasonable protection guaranteed to their flocks. The following is a full text of the new law.

ARTICLE 5-B.

LICENSING OF DOGS AND PROTECTION OF DOMESTIC ANIMALS THEREFROM.

- | | |
|--------------|--|
| Section 131. | Definitions. |
| 132. | Dogs to be licensed; fees. |
| 133. | Special kennel licenses. |
| 134. | Assessors to prepare lists of dogs. |
| 135. | Issuance of licenses; penalty for failure to obtain. |
| 136. | Tags to be furnished; how attached. |
| 137. | Registry of licenses. |
| 138. | Tags and blanks to be furnished by commissioner of agriculture; forms. |

Section 139. Killing unlicensed dog.

- 139-a. Dog to be killed for attacking animals.
- 139-b. Dogs running at large; order of commissioner.
- 139-c. Dog killed on order of court or justice.
- 139-d. Town clerk to report failure to pay; penalties; fees of officers and magistrates.
- 139-e. Damages for injuries caused by dogs.
- 139-f. Amount of damages to be paid by the state; assignment of claim to state.
- 139-g. Report as to dog killed.
- 139-h. Disposition of fees, penalties and damages recovered.
- 139-i. Recovery of penalties; actions for damages.
- 139-j. Apportionment to towns and cities of surplus moneys.
- 139-k. Enforcement of provisions of chapter.
- 139-l. Application of act; saving clause.

§ 131. *Definitions.* When used in this act, the word "owner," referring to the owner of a dog, includes a person harboring or keeping such dog. The word "kennel," when so used, means a place where five or more dogs over six months old are harbored or kept, which dogs are registered in or by a recognized registry association. The word "dog," when so used, shall include a bitch, except where provision is made for the licensing of dogs and the payment of license fees.

§ 132. *Dogs to be licensed; fees.* A person who owns, harbors or keeps a dog shall obtain a license therefor, as provided herein, and shall pay the following fees: (1) two dollars for each male dog; (2) three dollars for each bitch; (3) twenty dollars for a kennel of pure-bred dogs, or such sum not in excess of such sum of twenty dollars as will equal two dollars for each dog over six months old harbored or kept in such kennel, for which a special kennel license shall be given as hereinafter provided. There shall be paid to the town or city clerk, in addition to each license fee, the sum of twenty-five cents as a registration fee, for the services of such clerk,

Application for a license shall be made to the clerk of the town or city in which the dog is harbored or kept. Such application shall be in writing and shall state the name, sex, breed, age, color and marking of the dog for which a license is sought.

Licenses first obtained hereunder shall be applied for on or before July first, nineteen hundred and seventeen. Licenses thereafter issued shall be applied for on or before March first in each year, and shall continue for a term of one year. Licenses shall not be required for dogs under the age of four months, or under the age of six months if the owner be the breeder thereof. If such dog shall become of the age of four months, or of six months if the owner be the breeder thereof, after the first day of March, or if a person shall become the owner of an unlicensed dog after such date, or if a license issued under existing laws prior to the taking effect of this act shall expire after such date, the license fee for the balance of the twelve months shall be a proportionate part of the fee charged for one year, and the fee of twenty-five cents for the registration of such dog. Each license of a dog first issued shall take effect when issued, and shall expire on the last day of February following its issuance. Each license in renewal of a license already issued shall be for a term of one year beginning on March first.

§ 133. *Special kennel licenses.* The owner of a kennel may apply for and obtain a special kennel license, which shall be in lieu of the license issued under this chapter for each dog harbored or kept in such kennel. Upon the procuring of such special license for a kennel, the owner or owners thereof shall be exempt from any further license fee in respect to such dogs for the year for which such license is issued. The applicant shall present with his application for a kennel license a registry certificate of the registry association registering the dogs in such kennel. A copy of such certificate shall be filed with the city or town clerk. If the owner of a kennel shall harbor or keep a dog which is not covered by such a certificate, such dog shall be licensed separately and the same fee paid as in the case of other dogs. A kennel license shall continue for the same period as licenses issued under the preceding section.

§ 134. *Assessors to prepare lists of dogs.* The assessors of each town or police department of a city shall annually in the month of June ascertain by due inquiry the dogs owned, harbored or kept in such town or city. Each owner of a dog shall answer all questions relative to ownership of such dog, and if he answers falsely or refuses to answer such questions, he shall be subject to a penalty of ten dollars, to be recovered in an action brought therefor as hereinafter provided.

The assessors of each town and the police department of each city shall prepare a list containing the names and addresses, by street and number if any, of the owners of dogs in such town or city, and the number and sex of dogs owned, harbored or kept by each owner, and whether such dogs are kept or harbored in kennels. Such list shall be prepared in duplicate, one of which shall be filed with the town or city clerk and the other with the commissioner of agriculture. The assessors shall receive as compensation for their services the sum of twenty cents for each dog listed by them, which shall be paid out of the State treasury out of moneys appropriated for the enforcement of the provisions of this chapter.

§ 135. *Issuance of licenses; penalty for failure to obtain.* A license shall be issued upon application being made therefor and upon payment of the fee hereinbefore prescribed. Such license shall be in the form prescribed by the commissioner of agriculture, and shall be executed by the town or city clerk. Each license shall state the year for which it was issued and shall bear a serial number. An owner of a dog, who fails or refuses to obtain a license for such dog within thirty days after he is required to do so under the provisions of this chapter, shall be subject to a penalty of ten dollars.

§ 136. *Tags to be furnished; how attached.* The city or town clerk issuing such license shall at the time of the issuance thereof deliver to the owner a metal tag. Such tag shall bear the same date and serial number as the license. The owner of the dog so licensed shall place and keep around the neck of such dog a collar of leather or other suitable material, and shall attach such tag to such collar by means of rivets, metal bands or other suitable devices. An owner of a dog shall not permit a licensed dog to be without such collar and tag during the period of the license.

And where the license thus issued is the special kennel license hereinbefore provided for, it shall be the duty of the city or town clerk to deliver to the person to whom the special kennel license is delivered as many metal tags as there are dogs over six months of age covered by such special license. The town or city clerk shall also be paid by the person to whom the same is issued a tag fee of twenty-five cents for each tag issued.

A new tag with a new number shall be furnished to the owner of a licensed dog by the city or town clerk, in place of the original tag, upon presentation of the license and proof of the loss of such original tag. The clerk shall endorse the new number of such tag on such license, and shall enter it upon the registry. The clerk shall receive for his services in issuing such new tag the sum of twenty-five cents.

§ 137. *Registry of licenses.* The town and city clerk shall register the dogs and kennels licensed under the provisions of this chapter, in a book to be provided for such purpose. The books for the registry of such licenses shall be furnished by the commissioner of agriculture and shall be kept in the manner prescribed by him. Such registry shall contain the name of the owner of the dog or kennel licensed, the date of the license, and the number of the tag or tags issued for each licensed dog or kennel. Such clerk shall furnish, upon the demand of the commissioner of agriculture, transcripts of the whole or any part of such registry, and shall receive therefor compensation to be fixed by the commissioner.

§ 138. *Tags and blanks to be furnished by commissioner of agriculture; forms.* The forms of applications for licenses and of other statements, reports, certificates and papers required to be filed or presented under the provisions of this chapter shall be prescribed by the commissioner of agriculture. The commissioner shall furnish to each town or city clerk (1) a sufficient number of blank applications for licenses and licenses for the use of such clerk in licensing dogs as provided herein; (2) blank statements, reports, certificates and other documents required for the purposes of this chapter; (3) a sufficient number of suitable metal tags required to be worn by dogs licensed as provided in this chapter. The cost of such blanks and tags shall be paid by the commissioner out of moneys appropriated therefor.

§ 139. *Killing unlicensed dog.* The fact that a dog is without a tag attached to a collar, as hereinbefore required, shall be presumptive evidence that such dog is unlicensed and that a tag was not issued and attached as so required. An action shall not be maintained for an injury to or destruction of a dog without a tag, unless it shall appear affirmatively that such dog was duly licensed under this chapter and that a tag was duly fastened to the collar of the dog and was lost or removed without the owner's knowledge or consent.

A representative designated by the commissioner, or any peace officer, may seize an unlicensed dog, either on or off the owner's premises, or if the dog be not delivered to him by the owner on request and he cannot with reasonable effort secure him, he may after pursuit, kill the dog. If the owner of the dog so seized does not, within ten days after such seizure, obtain a proper license, and pay the sum of two dollars as the cost of seizure, such dog may be killed or sold by such representative or peace officer. The proceeds of the sale and the charge made for such seizure shall be paid into the State treasury.

Incorporated societies for the prevention of cruelty to animals, humane, or other like associations or corporations, now performing duties or exercising functions with reference to dogs in cities, under existing provisions of law or contracts entered into by them with the several cities of the State in which such duties or functions are performed or exercised, shall continue to perform such duties or exercise such functions in accordance with such provisions of law or the terms of such contracts. But the commissioner of agriculture may by an order revoke the right of any such society, association or corporation to perform such duties or exercise such functions, if, after notice to such society, association or corporation and a hearing thereon, it shall appear that by reason of the failure of such society, association or corporation to discharge properly its duties or functions under such provisions of law or contracts, dogs in the city in which such society, association or corporation is operating injure sheep by attacking, chasing or worrying, either within or without the city. Such order shall not be effective until approved by the governor. Whenever requested by any municipality, it shall be the duty of the com-

missioner of agriculture to permit impounded dogs required to be killed under this act, to be killed by or under the direction of such a society, association or corporation. Contracts hereafter entered into between an incorporated society for the prevention of cruelty to animals and the mayor of a city of the second class, under the provisions of section two hundred and thirty of the second class cities law, shall be subject to the approval of the commissioner of agriculture and shall when so approved be in full force and effect, subject to the provisions of this article; provided, however, that the compensation to be paid under such contracts shall not exceed the amount of the surplus apportioned to such cities as provided in this article.

§ 139-a. *Dog to be killed for attacking animals.* Any person may kill a dog while it is attacking, chasing or worrying any domestic animal having a commercial value, or attacking fowls, or while such dog is being pursued thereafter.

§ 139-b. *Dogs running at large; order of commissioner.* The commissioner, of his own motion or on the application of at least two residents, may issue an order restraining the owner of a dog, to be described in such order as dangerous to persons, domestic animals or fowls, from permitting such dog to run at large outside of and away from the premises of the owner, during a time to be specified in such order. Such order shall be served personally or by registered mail on the owner, or in case of his absence on an adult member of the family or person in charge of the premises where such dog is harbored.

An owner of a dog who, after the service of such order, causes or permits such dog to run at large in violation of such order, shall be subject to a penalty of twenty-five dollars for each offense.

Whenever in the judgment of the commissioner of agriculture, other regulations in this act for the supervision of dogs and the protection of domestic animals and fowls have proved inadequate for such purposes in a town, the said commissioner may make and publish an order that the dogs in such town shall be securely confined between sunset and one hour after sunrise from May first until November first or any shorter period in any year between such dates. Such order shall be posted in at least three public places in such town and published in a newspaper if any published

in such town, and if there be no such paper, in a newspaper, if any, published in the county in which such town is located. If any owner of a dog or person harboring the same, refuse or neglect to confine his dog within one week after such posting and publication as required by such order he shall forfeit the sum of ten dollars to be recovered by the commissioner of agriculture, and any representative of the commissioner, or policeman, constable or other peace officer may seize and impound a dog permitted to run at large in violation of said order and hold the same until said penalty is paid, and if not paid within five days, kill the said dog in the same manner as if the dog had not been licensed and tagged under the provisions of this act.

The duly designated representative of the commissioner or any peace officer shall, and any other person may, kill on sight any dog running at large in violation of this section, provided he shall first have made reasonable effort to secure said dog and failed.

When seizure of a dog is made under any of the provisions of this article notice of such seizure shall be immediately given to the owner thereof if he may be found upon reasonable inquiry within the time during which such dog is required to be held prior to his disposal as provided herein. Such notice may be served upon the owner either personally, by registered mail, or in case of the absence of the owner from home by leaving a copy thereof with the person in charge of the premises where such dog was harbored. Every dog seized under the provisions of this article shall be properly fed and cared for until disposition thereof be made as herein provided.

§ 139-c. *Dog killed on order of court or justice.* If a dog shall attack a person who is peaceably traveling upon a street or highway or is otherwise peaceably conducting himself on premises where he may lawfully be, or shall attack his horse or team or any domestic animal having a commercial value, which is peaceably traveling on a street or highway in charge of such person, or on premises where it may lawfully be, and complaint thereof be made by the person attacked, or if a child by his parent or guardian, or in case of an animal, by the owner or person in charge of the same, or by a duly designated representative of the commissioner, or any peace officer, to a justice of the peace of the town or, within a city,

to a police justice or judge of a municipal court having the general jurisdiction of a justice of the peace, such justice or court shall inquire into the complaint, upon notice of not less than three days to the owner of the dog. If upon investigation of the facts he is satisfied of the truth of the complaint, such justice or court shall order the owner to kill the dog immediately. An owner who fails to kill such dog within forty-eight hours after the service upon him of such order, either personally or by registered mail, shall be subject to a penalty of ten dollars, and the further penalty of two dollars for each twenty-four hours thereafter until the dog is killed. If such order be issued and the owner fails to kill such dog as required therein, a duly designated representative of the commissioner or any peace officer shall kill such dog on or off the premises of the owner, and any person may kill such dog if running at large off the premises of the owner.

§ 139-d. *Town clerk to report failure to pay; penalties; fees of officers and magistrates.* If any owner of a dog in a town or village neglects or refuses to obtain a license and pay the license fee to the town clerk as herein required, the town clerk shall report such fact to a justice of the peace or other magistrate in the town or village where such owner resides and to the commissioner of agriculture. Such justice of the peace or magistrate shall forthwith issue an order signed by him directed to any constable, policeman or peace officer of such town or village requiring him to seize and impound such dog. He shall keep the dog impounded for a period of five days, and if within that time the owner of the dog obtains a license and pays to the town clerk the license fee and in addition thereto the sum of two dollars, such dog shall be returned to the owner. If such license is not so obtained and such sum so paid within such time the dog shall be killed by the officer seizing and impounding him. The peace officer shall within twenty-four hours after the seizure of the dog report the same to the justice of the peace or magistrate issuing the order.

A constable, policeman or peace officer receiving and executing such order shall be paid for each dog seized by him in pursuance of such order the sum of two dollars, and for each impounded dog killed by him, the additional sum of one dollar. He shall also be paid for each mile necessarily travelled in the execution

of such order, the sum of five cents per mile to be audited and allowed by the justice of the peace or magistrate issuing such order, not exceeding in any case the sum of two dollars. The justice of the peace or magistrate shall be entitled to receive as a fee for each order issued by him the sum of twenty cents for each dog directed to be seized thereunder; but a single order shall be issued to cover all dogs included in a single report as not being duly licensed, and the total sum charged for such single order shall not exceed the sum of three dollars. The justice of the peace or the magistrate and the constable, policeman or peace officer entitled to such fees shall make out and file with the commissioner of agriculture vouchers, in the form and manner prescribed by him, showing the fees to which they are entitled under this section, and upon the allowance thereof the same shall be paid by the comptroller out of moneys collected under the provisions of this act.

If a town clerk fail to make a report containing the names of the owners of dogs who have neglected or refused to obtain licenses for such dogs and to pay the license fee as herein provided, or if any officer receiving an order to seize, impound or kill any dog, fail or refuse to execute said order, he shall forfeit the sum of ten dollars to be collected by the commissioner of agriculture.

§ 139-e. *Damages for injuries caused by dogs.* The owner of a dog which shall attack, chase, worry, injure or kill domestic animals or fowls shall be liable for the damages caused thereby, to be recovered as herein provided, for the benefit of the owner of such domestic animals or fowls. Such damages shall equal the value of the animals or fowls killed, or if not killed, the amount of the damages caused by the injury of such animals or fowls, and if the damage suffered amounts to five dollars or more there shall be added thereto the sum of ten dollars as liquidated damages for the injury caused by such dog. If sheep are attacked, chased or worried, the amount of damages to be recovered shall be as above provided, and there shall be added to the amount of such damages the sum of two dollars for each ewe, of the age of one year or upwards, in the flock attacked, chased or worried by such dog.

§ 139-f. *Amount of damages to be paid by the State; assignment of claim to State.* The owner of domestic animals or fowls attacked, chased, worried, injured or killed by a dog, may within

sixty days thereafter present to the commissioner of agriculture a verified claim for the damages caused thereby. The form of such claim shall be prescribed by the commissioner. Upon the presentation of such claim, the commissioner shall forthwith cause an investigation to be made of the matters alleged therein. If it appear to his satisfaction upon such investigation that the alleged damages were caused by a dog or dogs, he shall determine the amount of such damages. He shall thereupon execute a certificate in duplicate, containing the name of the owner of such animals or fowls and the amount of the damages ascertained by him. One of such certificates shall be filed in the office of the comptroller, and the other delivered to the owner. The commissioner shall cause such certificate, with notice of the filing thereof, to be sent by mail to the person in whose favor the certificate was issued. The person to whom such certificate was issued, or his assignee or legal representative, may present the same for payment and the amount thereof shall be paid to such person, or his assignee or legal representative, by the state treasurer on a warrant of the comptroller, out of any moneys available therefor, upon a proper receipt being signed by the person entitled to such payment and upon the presentation of an assignment to the state of the claim for damages against the owner or owners of the dog or dogs causing such damages. The form of such assignment shall be prescribed by the commissioner. The comptroller shall deliver such assignment to the commissioner of agriculture. If the owner of the animals or fowls attacked, chased, worried, injured or killed, shall not present to the comptroller the duplicate certificate above mentioned within six months after the execution thereof by the commissioner, he shall be deemed to have rejected the commissioner's determination of the amount of compensation to be paid for the damages incurred and the amount thereof shall not be paid by the state.

§ 139-g. *Report as to dog killed.* Any person who shall kill a dog under the provisions of this act shall forthwith report in writing such fact to the town, village or city clerk or to a justice of the peace, police justice or other magistrate having jurisdiction of the town or city in which such killing took place. Such report shall state the name and address of the person who killed the dog, a description of the dog killed, together with the time, place and

circumstances of the killing and the disposition made of the carcass of the dog. Such reports shall be open to public inspection at any reasonable time during the regular office hours of the office in which they are filed. A person killing a dog under the provisions of this article shall dispose of the carcass. Any person failing to make a report shall be subject to a penalty of ten dollars to be recovered in an action brought therefor as provided in this article.

§ 139-h. *Disposition of fees, penalties and damages recovered.* On or before the fifth day of each month the town or city clerk shall remit to the state treasurer the amount of all license fees received by such clerk during the preceding calendar month, except that in a city where under the laws existing at the time of the taking effect of this act, any portion of the license fees for licensing dogs is paid into the police pension fund in the city, in which case an amount equal to the amount payable from license fees to such pension fund under the laws existing prior to the taking effect of this act shall be deducted therefrom and be paid into such police pension fund. He shall at the same time transmit to the commissioner of agriculture a statement of the fees received and remitted, showing the number of dogs of each sex licensed and the total amount of license fees received for each sex. Such statement shall be in the form prescribed by the commissioner and shall contain such other information as he may require. The amount remitted shall not include the tag fee collected by such clerk as compensation for his services. Such tag fees shall be retained by the clerk unless his office be salaried, in which case such fees shall be disposed of as provided by law.

All penalties recovered under this act and all moneys recovered by the commissioner in actions brought against owners of dogs on account of assigned claims for damages to domestic animals or fowls, and all moneys realized on the sale of unlicensed dogs, as provided in this chapter, shall be paid by the commissioner of agriculture into the state treasury. The moneys paid into the state treasury under this section shall so far as necessary be appropriated by the legislature to be expended for the enforcement of the provisions of this chapter and for the payment of compensation for damages caused by dogs to domestic animals or fowls, as hereinbefore provided.

§ 139-i. *Recovery of penalties; actions for damages.* Penalties imposed by this chapter shall be recovered in actions brought by the commissioner of agriculture in a court of competent jurisdiction. The commissioner shall, when he deems it for the best interests of the state, cause an action to be brought in his name against the proper parties upon a claim for damages assigned to the state as provided in this chapter, by the owner of domestic animals or fowls. The commissioner may by proper written authority authorize an inspector to bring an action in the name of the commissioner upon such assigned claim or for the recovery of such penalties. The commissioner may, in his discretion, compromise or settle any such assigned claim for damages.

§ 139-j. *Apportionment to towns and cities of surplus moneys.* In the month of January in each year, the commissioner of agriculture shall report to the legislature the total amount paid into the state treasury pursuant to this chapter during the preceding year, the total amount appropriated by the legislature for the enforcement of the provisions of this act, the total amount expended therefor, and the amount paid out as compensation for damages to owners of domestic animals and fowls killed, injured or damaged by dogs. The surplus shall be distributed among the several towns and cities of the state, on the basis of and in proportion to the contributions made by such towns and cities on account of the provisions of this chapter. In determining the share of such surplus to be distributed to a town or city, amounts expended in a town under sections one hundred and thirty-nine-b and one hundred and thirty-nine-d and any amount paid on account of damages caused by dogs owned in such town or city shall be deducted from its distributive share. If damage be done by unknown dogs it shall be deducted from the share of the town or city in which the damage was done. The commissioner of agriculture shall determine the amounts to be apportioned to such towns and cities and the same shall be paid to the proper financial officers of such towns and cities out of moneys appropriated therefor. The moneys when paid to any such city or town shall be disposed of according to existing provisions of law as to the dog fund.

§ 139-k. *Enforcement of provisions of chapter.* The commissioner of agriculture shall enforce the provisions of this chapter. He may appoint three or more inspectors who shall, under the

supervision and direction of the commissioner, cause such provisions to be carried into effect, and, for such purpose, shall have the powers and perform the duties prescribed by him. Each inspector shall receive an annual salary of fifteen hundred dollars and his necessary expenses. The commissioner may designate representatives for the enforcement of the provisions of this chapter, and shall fix their compensation, within the appropriations available therefor. The commissioner may designate humane or other like associations or corporations or any of the officers or agents thereof for the enforcement of the provisions of this article in cities and towns where such associations are authorized to operate, and may fix the compensation for such services within the appropriations available therefor. The commissioner may also designate a city officer having authority to seize, detain or perform any duty in respect to dogs, under the provisions of a city law, as his representative for the enforcement of the provisions of this article in such city and shall fix his compensation for his services; if the salary of such officer is paid by the city the amount of the compensation fixed by the commissioner, together with all other fees earned by him for the performance of duties under this article, shall be paid into the city treasurer * and applied in payment of the salary of such officer.

§ 139-1. *Application of act; saving clause.* 1. The provisions of this chapter relating to the licensing of dogs in a city shall not apply to the city of New York. The other provisions of this chapter shall not apply to dogs kept or harbored within the city of New York while they remain within the boundaries thereof.

2. A dog duly licensed or registered under existing laws when this act takes effect is not required to be licensed under this chapter before the expiration of such license or registration, and a dog wearing a tag issued upon such license or registration shall be deemed duly tagged under this chapter. A dog not so licensed or registered when this act takes effect, but for which a tax shall have been levied and paid for the year nineteen hundred and seventeen, shall be licensed under the provisions of this chapter, but no license fee shall be charged therefor except the tag fee of twenty-five cents to be paid to the town or city clerk as compensation for his services.

* So in original.

3. The provisions of this article shall not apply to a dog owned by a nonresident passing through any village, town or city to which this article relates nor to dogs brought to any such village, town or city and entered for exhibition at any dog show, if confined or in immediate charge.

4. The provisions of this article shall not apply to dogs actually confined to the premises of incorporated societies devoted to the care or hospital treatment of lost, strayed or homeless animals, or confined to the premises of public or private hospitals devoted to the treatment of sick or diseased animals.

§ 2. Article seven, constituting sections one hundred and ten to one hundred and thirty-six of chapter sixteen of the laws of nineteen hundred and nine, entitled "An act in relation to counties, constituting chapter eleven of the consolidated laws," and the acts amendatory thereof or supplemental thereto, are hereby repealed.

§ 3. Article eight of chapter twenty-six of the laws of nineteen hundred and nine, entitled "An act in relation to cities, constituting chapter twenty-one of the consolidated laws," as added by chapter seven hundred and eighteen of the laws of nineteen hundred and eleven, is hereby repealed.

§ 4. Article fifteen of chapter fifty-five of the laws of nineteen hundred and nine, entitled "An act in relation to cities of the second class, constituting chapter fifty-three of the consolidated laws," except section two hundred and thirty thereof, is hereby repealed.

§ 5. Local acts, in so far as they provide for or authorize the licensing or registration of dogs in cities of the first class, outside of the city of New York, and in so far as they are inconsistent herewith, are hereby repealed.

§ 6. This act shall take effect July first, nineteen hundred and seventeen, except that the provisions of sections one hundred and thirty-two, one hundred and thirty-three and one hundred and thirty-four of the article hereby inserted, relative to the applications for licenses and the preparation of lists of dogs, and the provisions of section one hundred and thirty-eight of such article, relative to the furnishing to town and city clerks of blank applications for licenses, licenses, statements, reports, certificates and other documents, and of metal tags, shall take effect immediately.

SHEEP BUILDINGS FOR WINTER PROTECTION

T. REG. ARKELL, B. S. A., B. Sc.

**Chief, Sheep and Goat Division, Federal Department of Agriculture,
Ottawa, Canada**

Sheep do not require elaborate nor expensive buildings. The principal and essential features pertaining to a sheep barn for winter use comprise dryness, fresh air without a draft, reasonable warmth, effective window lighting, convenient arrangement for feeding, and large exercise yards on the sunny side. Without reserve it can be said that the most necessary of these is dryness.

Too frequently this factor is neglected or overlooked and heavy losses ensue.

A certain degree of warmth is necessary but is not so imperative as dry footing. Fresh air is always a panacea for most ills, provided again it is attended with dryness, and a heavy current of air or a direct draft does not fall upon the animals. Exercise, especially with breeding ewes, must not be omitted. Convenience in feeding may be restricted for the sake of furnishing facilities for adequate exercise.

Dryness can be insured by selecting a high location for the sheep barn. It must never be placed where there is not most excellent drainage. Most of the diseases to which sheep are heir may be avoided by refraining to house or pasture these animals on marshy, wet land or where there is stagnant water. These conditions are prone to produce foot rot, navel ill with lambs, or other diseases of like character. Stagnant pools represent the most prolific breeding places for such internal parasites as stomach worm or the liver fluke. Besides parasites, sheep are affected with few diseases. It is generally recognized that they are virtually immune from tuberculosis, the bane of the cattle breeder. If the slogan of the sheep raiser will continually and constantly be "high and dry land," he will experi-

FIG. 5. SHEEP BARN NO. 1

ence little difficulty in maintaining his flock in a satisfactory and healthy physical condition.

VENTILATION ESSENTIAL

Warmth should never be secured at the expense of ventilation. Sheep have a protecting covering of wool, which, so long as they are dry, shields them from the influence of even very severe cold. The breeds most prevalent in America, especially the "Down" types, are capable of withstanding the most rigorous climate. In fact,

FIG. 6. INTERIOR OF SHEEP BARN No. 1

with a dry cold, although below zero, healthy sheep given their preference will not infrequently be found outside during the entire day and may even remain there during the night. For early lambing, a warm pen, of course, is required. For this purpose it is not sufficient to have a shed merely to protect the sheep from winter winds or snow. No elaborate system of ventilation is needed. A free flow of air through windows is sufficient, providing the windows are installed to preclude heavy drafts, either when open or shut. Money should not be spared for windows. Sunlight is one of the best germicides nature has furnished. Sheep will decline in health as much as a plant will etiolate, if shut off from sunlight.

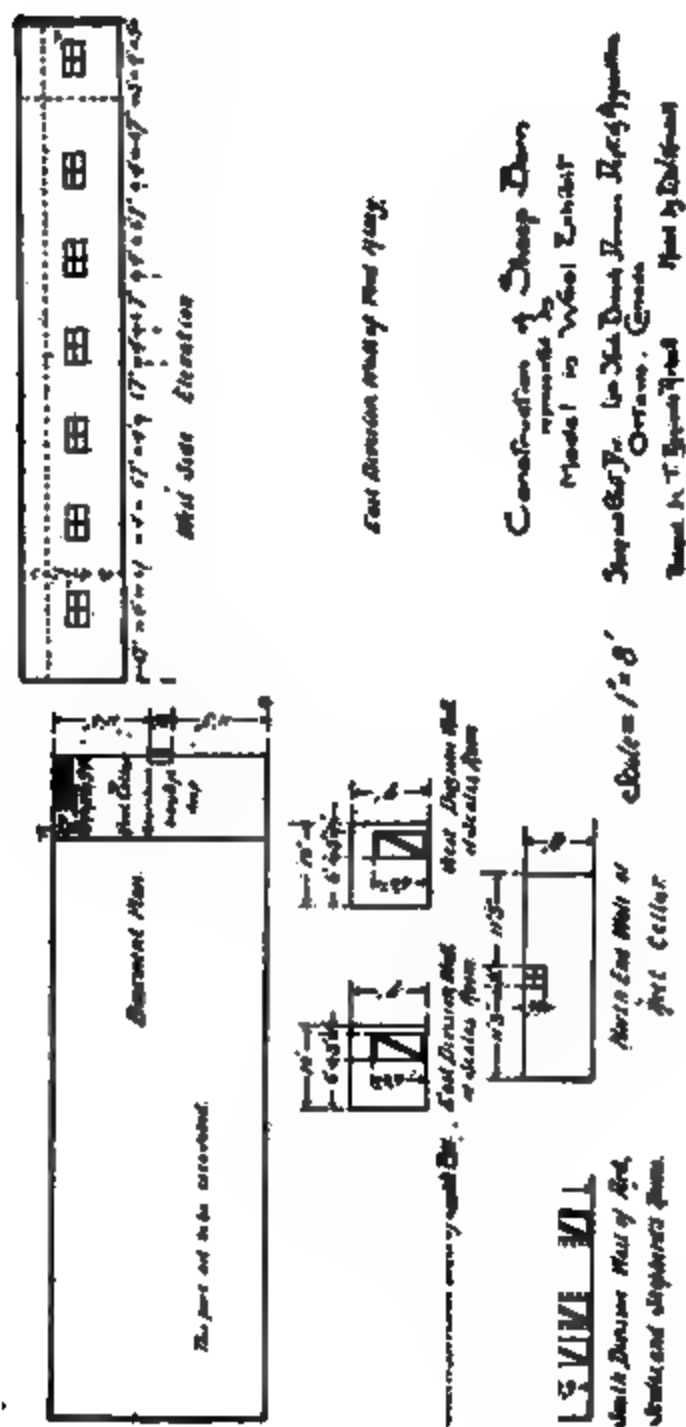


FIG. 7. PLAN OF SHEEP BARN NO. 1

EXERCISE

Exercise is a factor in sheep management to which the shepherd should pay the strictest attention. Effective feeding will go for naught, if the animals are confined in close quarters. This applies to an even greater degree to breeding or pregnant ewes than to other classes. Therefore, large yards should be constructed, opening out from the barn, to which the sheep may go at will. These are best located on the sunny side, unless the barn contains an alleyway in the center with pens on both sides. In such case, care should be taken that the yards are to some extent protected from the wind by shrubbery or other windbreak.

NECESSARY SPACE

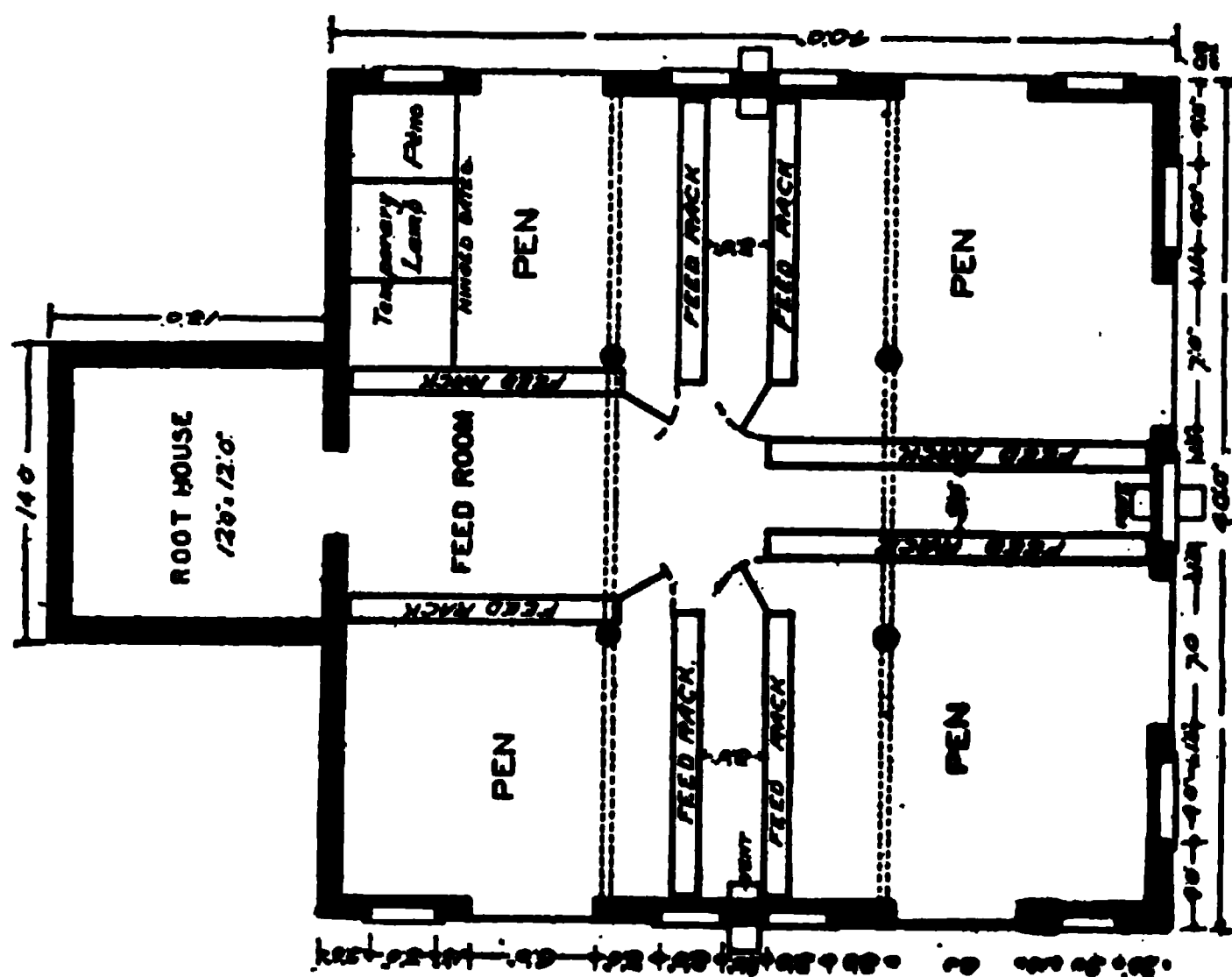
Space for winter quarters will vary to some degree, according to the breed of sheep. For instance, a Southdown will occupy much less space than a Lincoln. On the average, however, it is advisable to allot twenty to twenty-five square feet to each mature animal and sixteen to twenty square feet to lambs approaching the yearling stage. The shepherd should be guided in this by the appearance of the flock when resting. He can readily tell then whether the animals have insufficient space for comfort. Plenty of good straw bedding should be provided, and whenever this becomes damp it should be replenished. Excessive quantities of wet manure should be removed from time to time.

BUILDINGS

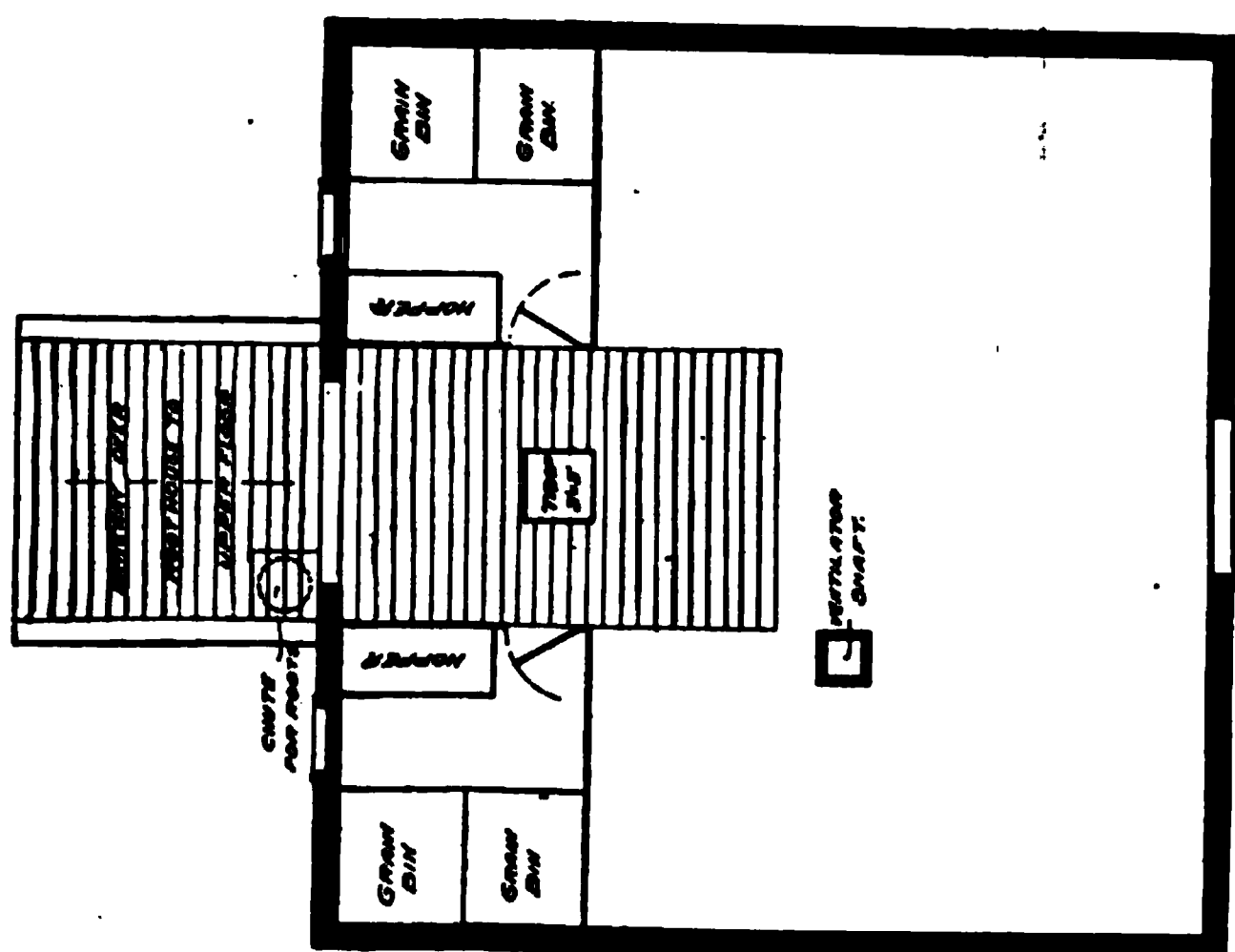
A barn well protected from the wind need not be double-boarded. Two thicknesses of boards with building paper between is sometimes necessary, especially if early lamb production is pursued. One hundred head of sheep may be housed in a barn of the following design, which may be varied to suit local conditions:

It is 25 feet by 80 feet long and is planned so that the yards face toward the east to obtain the early morning sun, with the feed room and root cellar to the north, although local topography may demand a different position. Ten feet of one end is used for supply and feed rooms and is separated from the remainder of the buildings by a partition. Underneath this a root cellar is excavated.

The sheep pens themselves must never be floored. A lambing pen is constructed against the feed room, which should be completely

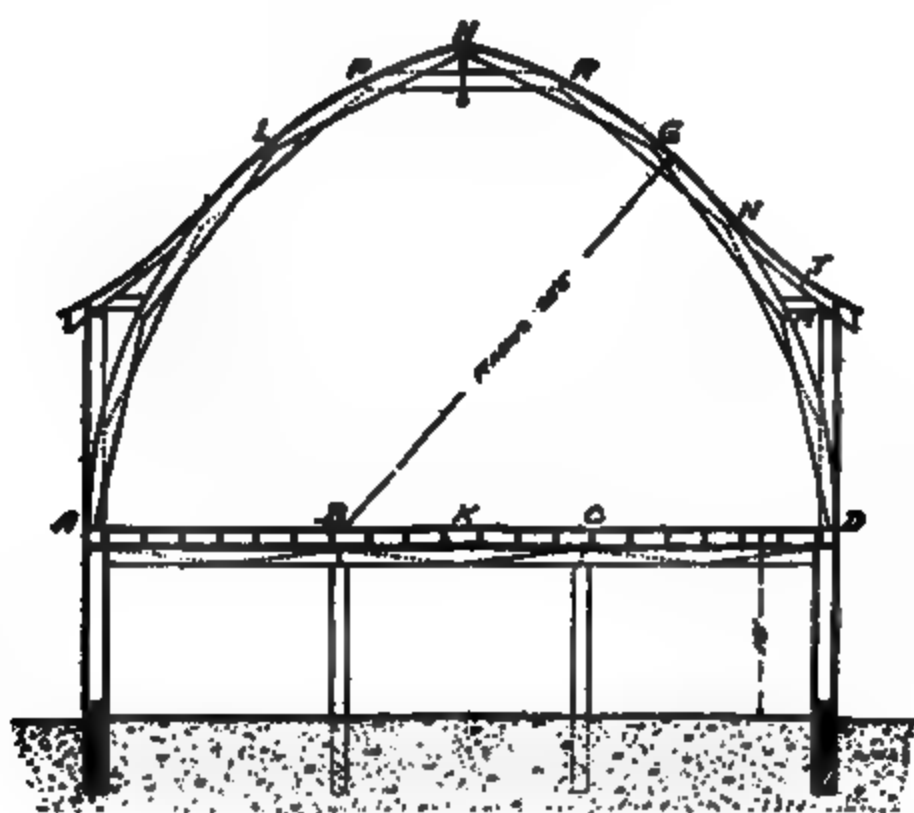


FLOOR PLAN OF SHEEP BARN.



PLAN OF UPPER FLOOR

FIG. 8. FLOOR PLANS OF SHEEP BARN NO. 2



CROSS SECTION.

LONGITUDINAL SECTION

FIG. 9. SECTIONS OF SHEEP BARN NO. 2

enclosed with boards from floor to ceiling; and, if it is the purpose to have lambs dropped in early winter, this should be boarded on both sides of the studding to form a still air space and thus assure sufficient warmth. The rest of the building is undivided except for a 4-foot passageway running along the west side.

Divisions may readily be made at any time by means of portable feed racks or hurdles. Arrangement for the storage of hay and grain is provided in a second story, the floor of which is supported by posts from below. The windows are $4 \times 2\frac{1}{2}$ feet, $6\frac{1}{2}$ feet apart,

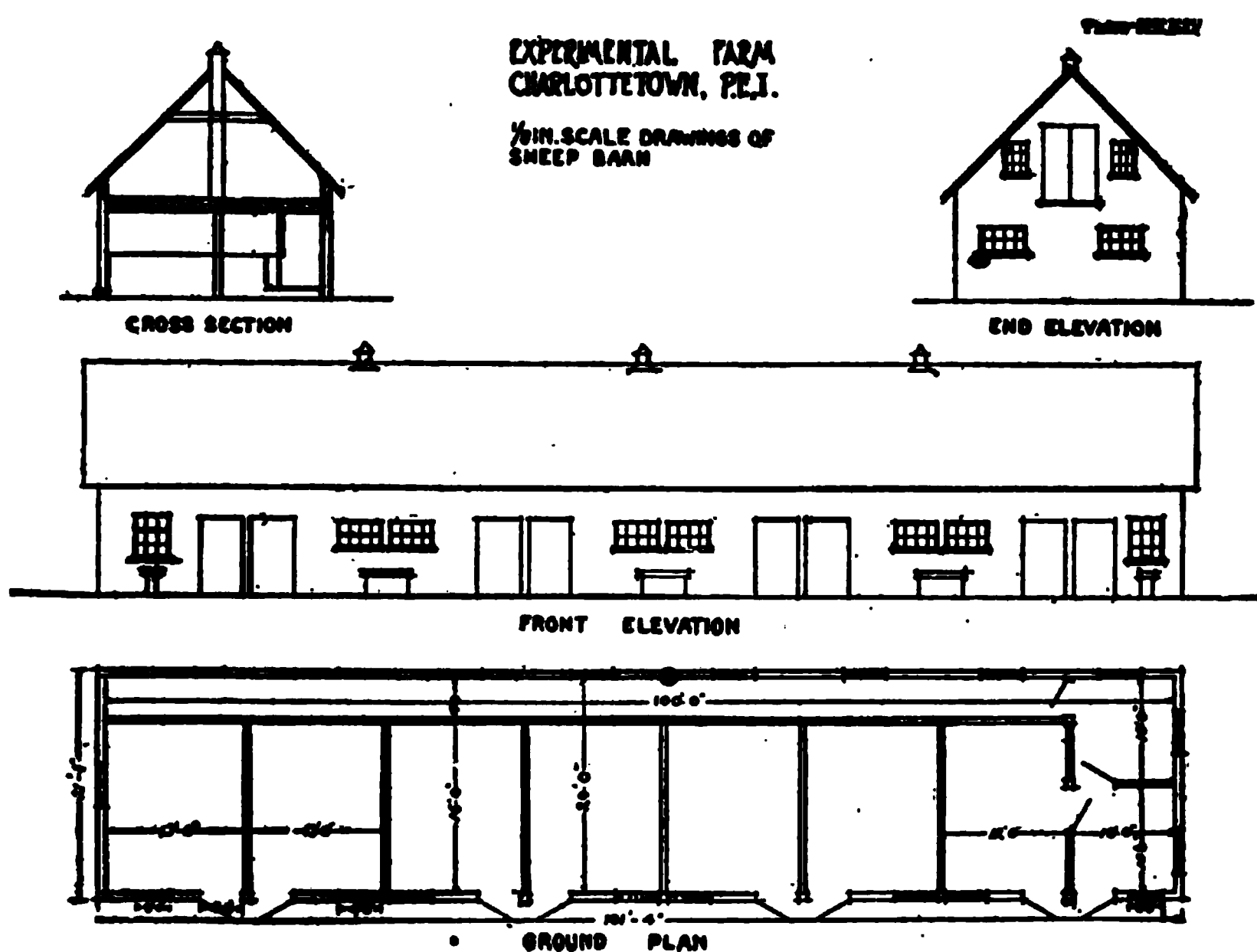


FIG. 10. SHEEP BARN No. 3

and placed $4\frac{1}{2}$ feet from the ground. They are constructed so as to slide back and forth in a groove. Doors, especially designed for the passage of sheep, are made 4 feet wide and 3 feet high. If the yards can be connected with both sides of the building, the passageway can be made in the center, which facilitates feeding and conserves labor. Under this condition, the barn should be wider and not so long.

The foregoing description represents the only general principles to be followed in sheep barn construction. Many types of barns

attaining the same purpose may be erected. Security and roominess should not be sacrificed to save expense. The cost will vary considerably, depending on local conditions and prices. It can be constructed relatively cheaper than a building for any other class of live stock. Partitioning, except for the feed room, lambing pen, and alleyway, is unnecessary. Portable feeding racks or hurdles can be used to make small or separate pens to suit the convenience of the shepherd and the character of the flock. Almost any type of roof will prove satisfactory; and flooring, except in the feed rooms, is not only a useless expenditure but may act as well as an actual menace to the health of the sheep. The bare ground, with an abundance of bedding, is the best floor. If the subsoil is of a gravelly, porous nature to permit drainage, it will prove an added advantage. In fine, the construction of a sheep barn should comprise common-sense methods on a practical basis without the influence of faddism.

FEEDING RACKS AND TROUGHS

Feeding racks may be permanently built along the sides of the barn. These should be of simple structure and should always be made of dressed lumber to prevent tearing of the wool. Grain troughs are of two classes — the V-shaped and flat-bottomed — and

FIG. 11. FLAT-BOTTOMED GRAIN TROUGH

may be made either stationary or portable. A suitable length for convenient handling is 12 feet.

The V-shaped trough is made of two pieces of $\frac{7}{8}$ -inch board, 8 inches wide and of the requisite length, nailed together. This should be secured to two permanent feet or bottoms near the ends

to support it on the ground and raise it from the ground about six inches. The feet should consist of 2x4-inch scantlings 18 inches long, running crosswise of the trough and connected to it by supporting pieces running from it to the sides. Security may be given to the trough by having the ends project three feet from the ground and joined by a 2x2-inch strip.

The flat-bottomed trough is enclosed by three pieces instead of two, each being 8 inches wide, nailed together with the uprights slanting slightly outward, giving a depth of about 6½ inches. In other respects it is similar to the V-shaped, except that elevation from the ground is optional. However, two supporting feet projecting about 1½ feet on either side at both ends will be found advantageous to prevent overturning.

FIG. 12. COMBINATION HAY RACK AND GRAIN TROUGH
This is not so satisfactory as the one enclosed at top

A combination hay rack and feed trough is the type most commonly in use. It especially conserves space and to a degree also decreases labor. It comprehends a hay rack set on top of a flat-bottomed grain trough elevated one foot from the ground. The measurements are, in the main, similar to those for the single appliances already described. The spaces between the rungs of the hay rack may be smaller, however — as narrow as 3½ inches, or just sufficient for the sheep to get its face through, not its entire head.

A grave mistake is frequently made with the hay section of this class of rack by having it V-shaped with a diagonal slope and open throughout its entire length. A rack of this character should be tightly boarded from the top halfway down. This will to a great degree prevent the hay from dropping on the necks or backs of the sheep. General dimensions are concisely as follows:

The grain trough is 1 foot from the floor, the bottom of which is 6 inches wide on each side and the front 5 inches high. The length of the slats is $2\frac{3}{4}$ feet, giving a height from the bottom of the grain trough of about 2 feet and a total height from the ground of about 3 feet. The width would be eighteen inches at trough and $2\frac{1}{2}$ feet at top of rack.

Racks of the dual class may also be made with the slats of the hay portion upright and on the outside margin of the grain trough. The hay will be deposited where the grain is also fed and the floor of

FIG. 13. COMBINATION HAY RACK AND GRAIN TROUGH, THE LATTER REMOVABLE

the hay rack, representing as well the grain trough, should slope from either side at an angle of sixty degrees toward the center, so that the grain will always be near the outer margin within easy reach of the sheep.

A survey of the accompanying photographs will help to explain the types of these different feeding appliances. The combination racks possess an added advantage, since they can also be used to affect divisions in a pen, two flocks being fed from both sides. They should always be manufactured heavy enough for this purpose. Any of these different designs may readily be adapted for permanent

location against a wall by adjusting measurements to include half or one side only of the rack.

It must, however, be borne constantly in mind that no type of rack can be evolved that will keep the wool of the sheep free from chaff or hay unless exceeding care at all times is taken by the shepherd in his feeding operations; and, if a high price for wool is to be obtained, this is a feature that no breeder can afford to neglect.

SUMMER HOUSING OF SHEEP

T. REG. ARKELL, B. S. A., B. Sc.

**Chief, Sheep and Goat Division, Federal Department of Agriculture,
Ottawa, Canada**

Summer housing is not a necessity with the commercial flock raised solely for the sale of mutton and wool. It becomes expedient with the fitting of sheep for exhibition purposes, or where intensive feeding is practiced, especially under a system of hurdling in pasture. Shelter of some character should under no condition be neglected for sheep on pasture, to protect them from the direct rays of the sun during midday heat. In the summer it will always be noted that sheep do most of their grazing during the early hours of morning or late in the evening. During the day they will spend their time under whatever shelter is provided — shed or trees. In every pasture field the presence of trees acts as a decided boon in raising sheep. Care should be taken, however, to remove from time to time the manure that will collect. This applies similarly in the case of field sheds or corrals.

SHELTER FOR EXHIBITION SHEEP

Exhibition sheep can most frequently be fed in the barn built for winter purposes. Coolness is the main requisite. A second-story barn on high posts will usually insure sufficient airiness to keep the temperature comfortably low. Many shepherds have provided dug-out cellars with stone walls, employed for the storage of roots in the winter, in which sheep can be maintained satisfactorily during the summer. Special attention, however, must be given to ascertain that the cellars are absolutely dry, since thrift cannot be sustained under conditions of dampness. For show sheep, soiling is necessary and feeding racks and grain troughs must be amply provided for this purpose.

HURDLING

Hurdling is frequently practiced with successful results, where the sheep possess special merits and rapid gains are to be attained. This consists of surrounding the animals in a pasture with a temporary corral, and moving them from day to day as they consume the

feed. The sheep are kept confined within narrow limits and consequently little energy is used up in superfluous exercise, the maximum amount of gain in weight being obtained for the feed consumed. This practice, of course, is followed only on the most desirable growths of pasture crops — as a heavy crop of alfalfa or clover, or a mixture of oats, wheat, and vetches. To attain the best results in this respect, a shelter should be furnished. A light, collapsible and portable cover can readily be made, which can either be attached and erected from the hurdles, or the outfit may be constructed on wheels and trundled from place to place. Four posts alone will, in



FIG. 14.—SHEEP SHED FOR SUMMER HOUSING

most instances, be sufficient to support the roof, which should be of very light material, and the hurdles may be connected and kept in place by the posts. By following this system, approximately one hundred sheep in several lots may be maintained on a heavy-growth pasture for about thirty days.

A shed for summer shelter may be enclosed completely on three sides, with a 12-foot opening in the front. A small window, however, should be located in each end to give sufficient lighting. The

back can stand 8 feet high and the front 10 feet, with a sloping roof having no pitch. The other dimensions may be made to conform with the number of sheep likely to be confined within it. The sills should be supported on a shallow stone foundation, to preserve them and prevent the rotting that otherwise would occur if placed directly on the ground.

COMMON DISEASES OF SHEEP AND THEIR TREATMENT

R. A. CRAIG

Chief Veterinarian, Purdue University, Lafayette, Indiana

The loss from disease has played an important part in causing farmers to lose interest in the sheep business, with the result that many of the small flocks have been marketed. Keeping the flock healthy is largely a management problem. The average farmer, and many herdsmen as well, do not realize this fact and depend on medicinal treatment more than on good management in preventing loss from disease.

Whether he knows it or not, the successful herdsman is well informed along disease-prevention lines. He furnishes the flock with sanitary quarters that are comfortable, clean, and well ventilated. His experience has taught him the inadvisability of confining sheep in a small lot; that they must be changed about or provided with plenty of range; and that infection and parasitic diseases can be avoided by quarantining recently-purchased animals before allowing them to run with the flock. The prevention of disease, if viewed from the standpoint of the stockman, is good management rather than mere luck.

Sheep are subject to as great a variety of diseases as other farm animals. Some diseases are more common than others, and this, together with the similarity of the behavior or symptoms that may be shown, has led herdsmen to believe that sheep are subject to but few diseases. It is indeed difficult to diagnose many of the ailments, and in order to be successful a person must be well informed in regard to the different symptoms and causes of disease, and "know sheep." Some herdsmen are close observers and immediately recognize any abnormal change in the behavior or appearance of animals in their care, while others do not seem to possess this faculty. This enables the good herdsman to resort to preventive measures, or call in a veterinarian and treat the sick animals at a time when prevention and treatment will do the most good.

ADMINISTRATION OF DRUGS

The common methods of administering medicine to sheep are with the feed and in a drench.

If the drug or mixture of drugs is such as can be given with the feed or drinking water and the sheep is not too sick to eat, this is the most practical method of dosing. Digestive tonics and drugs for the treatment of parasitic diseases of the intestine are commonly given with the feed or salt.

Sheep may be drenched when held either in the standing position or sitting on their haunches. The head should not be thrown too far back and it is not advisable to give the drench when the animal is struggling, because of the danger from the medicine getting into the air passages and lungs. It is very necessary to give the drench slowly in order to avoid this accident. Bulky drenches should be avoided as far as possible, and irritating drugs must be given in syrup and oil, or well diluted with water.

GENERAL DISEASES

Indigestion

Indigestion is a general term that is commonly used by stockmen in speaking of the different diseases involving the stomach and intestines. The different forms of indigestion occurring in sheep are bloating, overloading, impaction of the manyplies, and congestion of the abomasum and small intestine.

Faulty feeding methods commonly cause indigestion. Sudden changes from dry to succulent feed or from a part to a full ration are common causes of bloating and overloading of the rumen. Clover and green corn, especially if the animal is not accustomed to succulent feed and if a large quantity is eaten, may ferment quickly and cause bloating. The feeding of too much roughness, if woody and innutritious, and insufficient water may cause impaction of the manyplies. Timothy hay is not a safe roughage for sheep. Frosted grass and frozen feeds frequently cause indigestion. Sheep that are weakened by febrile diseases are predisposed to this disease.

The prevention of digestive disorders consists in practicing careful methods of feeding. Sheep that are in low physical condition should be given special care and fed a different ration from the other animals in the flock. The quality of the feed is important. Spoiled, frozen, and moldy feeds should not be fed.

The two common causes of acute indigestion in lambs are feeding an improper ration to the pregnant ewe, which results in low vitality in the lamb, and feeding spoiled feeds or too heavy a ration to the mother. Wet, cold, poorly-ventilated quarters may cause indigestion and diarrhoea in lambs.

In order to prevent loss from disease in lambs, the herdsman must build up the vitality of the unborn lamb by keeping the pregnant ewe in as perfect physical condition as possible. This can be accomplished through proper feeding, allowing plenty of exercise and providing clean, comfortable quarters. Lambs that are strong and vigorous when born are able to resist most of the ailments to which they are subject.

Lambs do not thrive if confined in dark, damp, draughty, dirty quarters. All young animals need sunshine; a dry bed; and clean, well-ventilated quarters, free from draughts.

Nervous disease

Breeding ewes very commonly develop a serious nervous disease. The most prominent symptoms are general paralysis of the body muscles and coma. The principal cause is lack of exercise. This disease is common in late winter and early spring, when the opportunity to take exercise is limited by the stormy weather, deep snows, and mud. The progress of the disease in the flock can be stopped by forcing the ewes to take exercise daily and administering a physic.

Colds and infections

Overcrowded and poorly-ventilated sleeping quarters commonly cause catarrhal colds, bronchitis, and pneumonia. During the fall and winter, mixed infections and septicemia are commonly met with under similar conditions. We frequently hear farmers state that sheep possess little resistance toward disease, but it is seldom a question of vitality. The trouble usually results from carelessness and lack of attention along sanitation lines. It is better for sheep to remain in the open with just enough shelter to keep their fleeces from becoming wet than to provide insanitary quarters for them.

The only satisfactory treatment for this group of diseases is prevention. This consists mainly in providing plenty of ventilation in

the sheep houses, avoiding overcrowding, and frequently cleaning and disinfecting the pens and houses. A dry bed free from accumulations of dust is very important. Sick animals should be separated from the flock and given comfortable quarters. In respiratory diseases careful nursing is more effective than medicinal treatment.

PARASITIC DISEASES

There are a number of species of parasites that infest sheep. The common external parasites are the sheep tick, the sheep-scab mite, and a specie of the biting louse.

Sheep tick

The sheep tick or louse fly is the most common external parasite. The adult tick and pupae are large and are found attached to the skin or adhering to the wool. When badly infested with ticks, the animal will rub, and dig or scratch the skin and fleece, which becomes rough and sometimes "taggy."

The treatment consists in dipping the flock in a water solution of coal tar disinfectant, or sheep dip preparation. A few days after clipping the ewes, the flock should be dipped in order to prevent the lambs from becoming badly infested with ticks. This may be repeated in about three weeks. It is very advisable to dip the flock early in the fall if there is any evidence of tick infestation.

Sheep scab

Sheep scab is not so common as it was a few years ago. This is the result of rigid enforcement of quarantine regulations by federal and state officials.

Sheep scab may affect any part of the animal's body. The bites of the mites greatly irritate the skin, and the animal scratches, bites, and rubs in the effort to relieve the intense itching. The skin becomes inflamed and scabby, the wool is pulled or rubbed out, and the fleece becomes ragged. By pulling out some of the wool from a newly-infested area or by collecting skin scrapings and placing them on a piece of black paper in a sunny, warm place, the white mites may be seen crawling over the paper. This method of diagnosis should be resorted to in all suspicious cases of skin disease and before it has developed to any great extent.

It is not advisable for farmers to attempt treatment of sheep scab. This disease should be reported to the state veterinarian, and the flock quarantined and treated under his direction.

Biting louse

The biting louse of sheep causes the fleece to become matted and tufts of wool are pulled out. This is brought about by the animal rubbing and nibbling the fleece and the lice cutting off the fibers of wool. The loss from injury to the fleece is greater than that resulting from unthriftiness.

Dipping the flock in a water solution of a coal tar disinfectant and repeating this in two or three weeks is the most effective treatment. After the first dipping the flock should be removed to new quarters in order to prevent reinfection. Dipping should not be practiced during cold weather, as the fleece does not dry out well. Insect powder may be dusted into the fleece when it is impossible to dip the animal.

Twisted stomach worm

The twisted stomach worm is the most injurious internal parasite of sheep. The adult worm is found attached to the lining membrane and mixed with the contents of the fourth compartment of the stomach (next to the small intestine). It is a small, hair-like worm from one-half to one inch in length, and can be readily found when a careful examination of the stomach contents of an infested animal is made.

This disease occurs in the late spring or during the warm months of the year. The lambs are the first to show symptoms. The symptoms are not characteristic unless we consider an unthrifty, anaemic, weak, emaciated condition, accompanied by diarrhea, characteristic of stomach worm infection. The sick animal is usually unable to keep up with the flock, and stands about in a shady, cool place. It moves slowly, the back is arched, mucous membranes and skin pale, and the hind parts soiled with diarrheal discharge. Swellings in the region of the jaw or neck may be noted. Death may occur without the animal showing marked symptoms of disease.

The treatment is largely preventive. Frequent change of pasture during the summer months, and the use of forage crops, or dry lot

feeding are important preventive measures. The practice of occasionally giving a vermifuge with the feed or salt is advisable. The most effective vermifuge that the writer has ever used is the following formula recommended by Dr. Law: Arsenous acid, 1 dram; sulphate of iron, 5 drams; powdered areca nut, 2 ounces; common salt, 4 ounces. This is sufficient for one dose for thirty sheep. If the flock does not show symptoms of disease, four doses given with ground feed at intervals of two or three days is sufficient. If symptoms of stomach worms are manifested, the animals should be dosed daily until they have received from five to ten doses. The treatment should be repeated in about a week if evidence of infection is still present.

•

SELECTION AND CARE OF THE BREEDING FLOCK

EDWARD VAN ALSTYNE, Kinderhook, N. Y.

Director of Farmers' Institutes

SELECTION AND CARE OF RAM

It should be manifest that in all cases none except a pure-bred ram should be kept. To use a nondescript or grade in this day and age is to put the user in a nonprogressive class and handicap him in obtaining best results. The following reasons will make this strong statement clear:

The essential difference between a pure-bred and one not of this class is that the former has been bred in one line so long that certain desirable characteristics are established, and these will be transmitted to its descendants with a certainty otherwise impossible. The non-pure-bred, although a fine individual, is likely to transmit the undesirable qualities of his unknown ancestor.

Divide into two parts a flock of ewes that are as nearly uniform as possible. Mate one portion with a pure-bred ram of ordinary parts, and the other with a grade of individual excellence, both rams having the same care and feed. Four times out of five the lambs from the pure-bred will be more uniform in make-up, will make more growth in a given time, and hence will bring more money, than will those from the grade. The extra ten or fifteen dollars paid for the former will, therefore, be a good investment.

CHARACTERISTICS

The ram should conform to the standard of the breed he represents and be of the type that the breeder desires to perpetuate. First of all, he should have constitutional vigor. This is indicated by the prominence and brightness of the eyes, wide-open nostrils, bright pink skin, as well as by the width and depth of the chest, indicating strong heart action. He should be well developed across the loins, with a straight back. His legs should be strong, and he should stand squarely on them. He should be well quartered. His neck should

be short and rather thick and his general appearance blocky without being chunky. This means straight sides with level and parallel top lines. While he should not be coarse or angular, more coarseness must be expected than in the ewe. In all rams of strictly mutton breeds, wool should not be lost sight of. It should be dense, of good quality and length of fibre, and the body should be well covered. One should have an ideal and select and breed to it. Great care should be exercised in ascertaining that the ram's ancestors have the desired characteristics.

FIG. 15.—PRIZE-WINNING SHROPSHIRE RAM AT NEW YORK
STATE FAIR, 1910

USE AND ABUSE

One of the established principles of breeding is that there must be maturity in the ancestors if one would have stamina in their descendants. For this reason one should use a lamb sparingly, if at all. It would be better not to use him until he is at least a year old; then he may be mated with as many as thirty ewes if he is discreetly handled. When two years old he is at his best, and he should be valuable until he is eight or ten. Just how long will depend on how intelligently he is fed and cared for. Excessive use and too much fat are two most frequent causes of decline. Insuf-

ficient nutrition is also answerable for failure of the ram to be a lamb getter as well as for weak offspring.

CARE AND FEED

It is unwise to allow the ram to run with the ewes other than at mating time. Many immaturesly dropped, malformed, or dead lambs may be accounted for by the ram jamming or butting the ewes when pregnant.

At least two weeks before mating season, the ram should be specially fed. If the pasture is good and he is in good flesh (as he should be), there is nothing better than from two to three pounds daily of oats and linseed meal, equal parts by weight. If he has been allowed to run down, a third part of corn may be added. Lacking good pasture, he should have in addition to the grain all the bright alfalfa or clover hay he will eat, and some vegetables. Turnips, beets, or apples are excellent. I would not advise silage at this time, as it has a tendency to make the ram impotent. If confined, he should have access to fresh water.

He should be turned with the ewes for an hour or two in the early morning and a like time before night. If the ewes are in a field convenient to the barn, this will not be so great a task as it might appear. He will soon learn to lead. A strap around his neck, with a ring into which a rope can be snapped, will facilitate matters. If he is fed with grain in the stable morning and night, he will soon learn to expect it and be ready to be led to it. No single operation will pay better. If some dried paint is put on his brisket, he will mark the ewes, and the owner can then see what service he is doing and determine when the ewes should conceive.

Left to run uncared for and indiscriminately, when lambing time comes there will be a number of strong lambs born within a week or ten days. Then they will come less frequently and be weaker, some not being born until very late, while some ewes will be barren. The ram has exhausted himself at the outset. Following the above plan, the bulk of the flock should lamb within a month or less and the last lambs be as strong as the first. I once saw a ram which had been mated with a hundred ewes. He was especially fed and mated individually. He was in perfect condition, and I was told the next spring that nearly every ewe dropped a vigorous lamb.

After the breeding season, most of his grain can be withdrawn. He should be in a pen or paddock by himself or allowed to run with wether or male lambs. An orchard is an excellent place in summer.

NEEDFUL PRECAUTIONS

His feet should be kept pared, the tag locks removed, and if necessary, he should be treated for parasites as is recommended for ewes, pp. 72-74.

The ram should never be teased, which is usually the cause for his becoming a bunter, and hence troublesome — often dangerous. When a ram has acquired this habit, an application of a light switch across the face will have a very satisfactory effect, but it will not deter him from attacking strangers. A face shield of leather will deter most rams.

With those unusually pugnacious, place a strap about the neck, on either side of which is fastened a round stick — an old rake handle will serve — extending about a foot behind his hind legs. Fasten over the back by a strap or web so that the hind end drags on the ground. This will prevent him from backing up, which he always does before lining up to strike. When one appreciates that the ram is half the flock, he will readily see how important it is to have him at his best and note the economy of observing the above advice.

PURE-BRED VERSUS GRADES

What has been said as to the ram, applies to the flock as a whole. The pure-bred will breed with greater uniformity. Many of the increase may be sold at prices much beyond what they would bring as mutton. The owner will take more pride in them and hence give them better care.

This should not be understood as meaning that everyone should keep pure-breds. The man who has sufficient funds should by all means do so. Men of limited means cannot afford to invest in any number, as the initial cost is too great and the interest charges and depreciation are more with high-priced stock. They should have better care to obtain best results. In any event, the flock should be uniform, of one general type; or, in other words, a grade of some particular breed best suited to the requirements of the owner, as set forth in "Establishing a flock under present conditions in New

York State," page 80, and in the articles in this bulletin descriptive of the different breeds. An indiscriminate flock will not thrive well under the same conditions. There will be a lack of uniformity in the lambs as well as in the wool, all meaning less weight and lower price.

STARTING A FLOCK

In starting a flock one should obtain the best grade ewes possible, and mate these with a pure-bred ram of the breed from which the ewes are graded. The first crop of lambs — if the ram has been selected intelligently — should be an improvement on their dams.

From these lambs there should be selected those most true to type to be saved for breeders. Continuing in this manner, the sheep will eventually so nearly resemble pure-breds as to be scarcely distinguishable from them. So far as sales from mutton and wool are concerned they will be little, if any, behind; but they will never be entitled to registry, nor will they bring as much for breeding purposes. If the ram is all he should be, he may be used with his daughters. This will not only make the lambs at least three-quarters pure, but will intensify the blood, which it is not possible to do so well or so quickly in any other way. Should a weakling appear from this breeding it should never be saved as a breeder. The writer has followed this plan with success for many years. Desiring winter lambs from a flock of grade Shropshires, he transformed them by this method into grade Tunis, with surprisingly good results, although on general principles cross-breeding is not recommended.

It is always wise to purchase one or more pure-blood ewes — as the contents of the pocketbook will permit — and gradually work into a pure-bred flock. The initial investment will be small. One will have learned their requirements and be prepared to give what is needed; and, by patience and perseverance — two most desirable qualities — and by the expenditure of time rather than cash, will eventually acquire a pure-bred flock. They will increase slowly at first, particularly if there is a preponderance of males; but after the number has reached ten, the increase will be comparatively rapid. These should by all means be kept recorded in the flock book of the association, both as an attestation of their purity of breeding and because of the enhanced price. In disposing of a flock I had no difficulty in obtaining forty per cent more for my pure-breds than

for my grades, and they had cost me no more. Some years ago I purchased ten pure-bred ewes for a neighbor. He neglected to keep their increase registered. Last fall I had an inquiry for a number of such at a good price to go to South America. He was not able to supply them, as his unrecognizable and unregistered sheep were worth no more than grades. They should be tagged or stamped in the ear so as to fix their identity.

AGE OF EWES

After the ewe has passed the fifth year she will frequently begin to lose teeth, although the full number of teeth is sometimes retained until 8 or 9 years of age. Until a sheep is 4 years old its age can usually be known within a few months by the teeth. After that time the age can only be estimated, the adult teeth becoming shorter and the distance between them increasing.

The milk teeth of the lambs are small and narrow. The two central incisors are replaced by large, broad, permanent teeth at about 12 months of age. At about 24 months two more large teeth appear, one on each side. The third pair appears at 3 years of age, and the fourth pair, or corner teeth, comes when the sheep is about 4 years old. The sheep then has a full mouth.

The exact time of appearance of the teeth is affected by the feed, light feeding tending to retard their growth.

ESTABLISHING A FLOCK UNDER PRESENT CONDITIONS IN NEW YORK STATE

The foregoing is always fundamental. At present there are certain other facts that must be recognized in re-establishing the sheep industry. Many men who are inclined to keep sheep have no knowledge of the business; and, should they invest largely, are liable to fail of success or to get their experience at too great a price. Except swine, no stock pay better. None are more susceptible to neglect or to improper environment. For this reason the business should be studied and the start gradual.

While there is little doubt that sheep are coming and should come back on New York State farms, it is seldom wise to invest heavily in any enterprise when it is at flood tide. The abnormal prices now

obtaining cannot be maintained; therefore, it would be unwise to stock up at the high price that one is now obliged to pay for sheep of any kind. Better "bide a wee," as the Scotchman would say, watching for an opportunity when the boom declines.

Many farms are so poorly fenced that it would be folly to put sheep on them until suitable fences are built. This also involves a cash outlay.

Many pastures have been so abused that there is really very little herbage on them. Unquestionably, the number of sheep per acre that may be kept on such land is much less than is often stated.

One of the reasons why men went out of the sheep business was that they had been keeping the fine wools, which, because of their tight fleece, could endure exposure, having been allowed to rustle for generations; consequently, upon changing to the mutton breeds, which for more than a century had been made what they are by an abundance of nutritious feed, careful housing, and treatment for parasites — and ignoring these facts, giving only the treatment accorded to the fine wools, the mutton breeds failed to thrive. Without fully realizing why, men said, "Sheep do not pay."

The same is true today. It is an unwise policy to put the open-wool, mutton breeds on the hill farms where pasture is poor and little grain is grown, and where the sheep must shift for themselves. They will be sure to disappoint their owners. The finer wools are much better adapted to such conditions, the wool playing the most important part, and the lambs not coming until pasture is ready and being marketed late in the fall. With these fine wool grades may be used a Southdown or a Shropshire ram, which will improve the mutton qualities of the lambs. It must be kept in mind in such case that, if the ewe lambs from this cross are saved for breeders, the flock will take on the characteristics of the sire and will eventually become grades of his breed. They will have the advantage of being bred to their environment; and, if the owner is observing, he will have adapted himself to their requirements — a practical evolution in both cases. If the flock is large enough, a fine-wool ram may also be kept, from whose stock the breeding stock is maintained; or suitable ewes may be purchased. The latter are not always to be obtained at a reasonable price and there is some danger of purchasing

diseases with them. In any event, in purchasing a ram for these flocks on the hill farms where but little care is given them, it is unwise to buy from a man whose rams have been developed under ideal conditions. Such animals will feel the contrast and be more apt to deteriorate than will those that have been developed under conditions not so dissimilar from those into which they are to be brought.

The Cheviots, which were developed on the Cheviot Hills of Scotland, are well adapted to these hill farms. However, their wool is more open and they will not stand wet so well as the tight wools. Being active sheep, they will require more fencing than will the more sluggish breeds.

Not only should the type of sheep be selected with reference to the farm, but attention should be paid to the market in which the lambs are to be disposed of, as well as to the taste of the owner and his ability to meet increased labor requirements. By carefully reading the description, derivation, and characteristics of the different breeds — always allowing for the prejudice of the writer in favor of his own — with the articles on marketing which follow in this bulletin, any intelligent man should be able to decide on the type which best dovetails into his farming,

Above all, no man should go into sheep — or anything else — until he is fully persuaded in his own mind that it is the proper thing for him to do. Then he must stick to them through evil as well as good report. He who invests when they are high, and goes out when they are low or when conditions are adverse, will always have his dish bottom upward when there is wherewithal to fill it. Surely, "The double-minded man is unstable in all his ways."

CARE AND FEED OF THE BREEDING FLOCK

The damage by dogs and the treatment of diseases, which play so important a part in the care of the flock, are especially treated on pages 32 and 69, hence this article will be confined to other phases of the subject.

Unless proper care is exercised, much good feed will go for naught, therefore, care is placed first. Success is not confined to any one thing, however important. It is made up of a number of little things, the neglect of any one of which may cause failure.

SHELTER

Nothing is more important than shelter * — particularly with the open-wool sheep — after the fleece is well grown and cold rains come on in the fall, or with all sheep immediately after being shorn. The sheep's skin is very thin. Because of their blanket of wool they do not feel the storm and consequently do not seek shelter from it as do other animals. After the fleece has become saturated it must be dried, during cold weather, chiefly from the heat of their bodies. Colds follow, which often run into catarrh or pneumonia, resulting in debility or death. In any event, the body heat, necessarily devoted to drying the fleece, will be lost as a maintainer of vigor or as a producer of increased growth. As they will not seek shelter during a storm, they must be driven to it. In distant pastures a sheep shed will be well worth while, both as a protection from the heat in summer and "a shelter in the time of storm." When near the buildings, they should be brought into their regular quarters. To pen them in a tight stable, after they are thoroughly wet, will do more harm than good. They need protection, not warmth, for sheep will stand a large amount of dry cold if they are sheltered from the wind. This means thought and time, but they will be well expended.

DRY, CLEAN QUARTERS

Sheep should never be so crowded as to compel them to travel through or lie in filth. This means abundance of bedding. The latter is very important at lambing time. If there is but little under them the lamb is likely to be chilled from the floor or cold earth before it has a chance to dry. Dropped on a bed of compact litter, it is not injured.

The feeding racks, both fodder and grain, should be cleaned out before fresh food is put in. Sheep will lose flesh with an abundance of feed before them, if it is put on top of that which has been breathed over, or which is soiled. The grain boxes should be arranged so that the sheep cannot soil them with their feet.

WATER NECESSARY

Sheep should have access to fresh water at all times. They like to drink a small quantity at frequent intervals. To compel them to

*See article on "Sheep Buildings for Winter Protection," p. 45.

eat snow in winter, which must be melted by the heat of the stomach, is to reduce the profit materially. They will live in summer on dew, if there is no other water, but they will not thrive. When obliged to drink from a tub or basin, the approaches should be kept perfectly dry.

AVOID CROWDING

Sharp angles in the pen, such as protruding racks, should be avoided, as should crowding through narrow passages, particularly at feeding time when they are eager to get to the rack. This is most essential when the ewes are pregnant. Many abortions, abnormal presentations, protruding wombs, and the like, are due to the above conditions.

SALT NECESSARY

Sheep are very fond of salt, and a sufficient quantity is necessary for their welfare. The old practice of salting the sheep on Sunday may be reckoned as a meritorious act, but not always as a wise one. Some sheep will eat too much, producing bowel trouble, while others may not get enough. Far better is it to keep a supply of salt continually before them, winter and summer, in a box or trough, conveniently sheltered from the weather and from the feet of the sheep by a slanting cover. In this way each sheep gets what its system requires, whenever desired. If tobacco stems, cut into short lengths, are put with the salt, in proportion of one-fourth the quantity of tobacco, little trouble will be had with the ordinary stomach worms.

CARE OF THE FLEECE

The hay or other fodder should never be carried over the sheep's back, nor the racks so constructed that the sheep can thrust the head and neck into the hay; for the wool will thus become filled with seed and chaff, which is very difficult to extract and therefore greatly impairs the value of the wool. In a discriminating market, this may make a difference of two or three cents a pound. Burs from the pasture should never be allowed to get into the wool.

After the wool has made some growth the sheep should be looked after to see that there is no accumulation of filth about the rectum. Besides causing a loss of wool, maggots will often breed in this foul mass, making nasty sores and at mating time often being a cause of failure to breed. All such locks should be carefully removed.

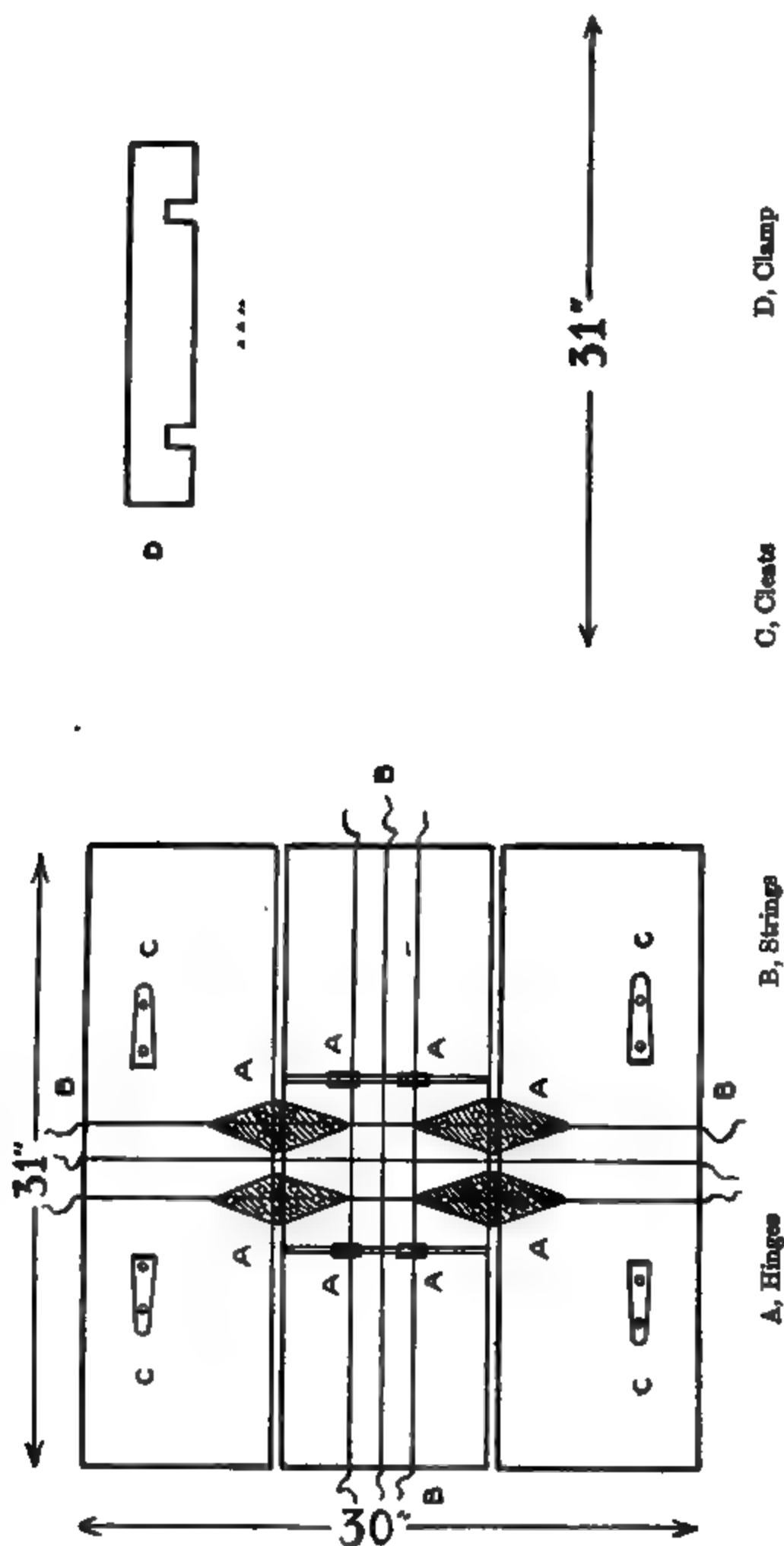


FIG. 16.—WOOL BOX, OPEN AND CLOSED

A box in which to place the wool when it is tied will make a much more attractive package. Binder twine should never be used for tying up the fleece. It is impossible wholly to separate its fiber from that of the wool and its use will reduce the price a cent or two a pound. It is better to shear the sheep before they go to pasture, as the fresh grass will physic them and more wool will be soiled.

Any failure of the sheep to grow will mean a break in the wool fiber. It should be remembered that whatever causes the sheep to grow will have the same effect on the wool. The ewe unconsciously uses her food, first to sustain her unborn lamb, next to sustain herself, and lastly to grow wool; the lesson is obvious.

SUMMER FEED

It is a mistake to turn the sheep out too early in the spring, from the standpoint of both the sheep and the pasture. The sudden change from solid food to the soft pasture grass will injuriously affect the bowels. It is wise to turn them out after they have had a feed of hay, bringing them in at night and reducing the grain ration by degrees.

If the pasture can be so divided that the sheep can be changed rather frequently, they will do better and the same area will afford more feed. If the pasture is scanty, Dwarf Essex rape may be sown in the early spring, using two pounds of seed per acre, the sheep having access to it during the summer. If preferred, it may be sown as late as the first of August, when it will afford feed long after the grass is gone. Sheep should never be turned on rape when they are empty or when the rape is wet, for it will cause bloat.

It is poor economy to leave the sheep on the pastures — worse still on the meadows — in December, after the grass is frozen. They will fill themselves with it, but it contains very little nutriment. With full stomachs they will be drawing on their stored-up flesh for nutriment and more feed will be required later to put them in condition. Rye sowed early makes excellent pasture; if not fed too close, it will benefit rather than injure the crop.

WINTER FEED

During winter, sheep should have some form of succulence. There is nothing better than the purple-top turnip, which can frequently

be grown in the corn or after early potatoes at little expense other than harvesting. Silage is a very close second. Two to three bushels to fifty sheep may be fed with profit. Cabbage is even better. Early-cut hay — alfalfa, clover, or mixed grasses — are the ideal fodders. Coarse timothy should never be fed. It lacks nutriment and the sharp stalks sometimes penetrate the walls of the stomach. Bright, barn-stored straw is more desirable than the timothy if one is short of fodder. Bean pods and stalks are excellent. An occasional feed of corn fodder is also good.

How much and what sort of grain to feed must be determined by the condition of the sheep and what one intends to do with them. If they come into winter quarters in good flesh and are not to drop their lambs until pasture, with some form of succulence and clover or alfalfa hay, no grain will be necessary. If they are thin, enough grain should be fed to put them in good flesh before lambing. This will materially increase the growth of wool. A sheep poor in flesh is always a light shearer.

Success with lambs, aside from vigorous mature parent stock depends more on a sufficient food supply of the right character than on any other one thing. A lamb is made up of bone, blood, and muscle. This calls for mineral matter and protein in the food of the mother, in order that she may supply building material in addition to the requirements of her own body and have an abundance of milk for the lamb at birth. Corn will not furnish this, and an excess of it often produces goiter in the lambs. When lambs are born in the winter, grain should be given at least a month before they are expected; if the sheep are thin, two months is better, beginning with a half-pint daily and increasing gradually to a pint. This grain may be bran, oats, brewers' grains — wet or dry — or any protein by-products such as one would feed to dry cows or heifers. After the lamb is born, corn may make up from one-quarter to one-half of the ration.

RAISING WINTER LAMBS

C. C. PERRY, Eagle Bridge, N. Y.

BREEDING IN SUMMER AND EARLY FALL

Those who know sheep understand that the fall and early winter months are their natural mating season, the lambs arriving in the spring; therefore, he who would raise winter lambs must, to a certain extent, work against nature.

This being the case, the novice wonders how to go about it to get those lambs to come in the fall instead of in the spring as nature evidently intended. Not knowing any hard and fast rule to give, the writer can only give his own experience. The Dorsets, Tunis, and Merinos and their grades will more readily breed earlier than other breeds. A grain ration a couple of weeks before mating will be helpful.

In January, 1905, forty-five Delaine Merino ewes were purchased that were due to lamb in April. Having very little stock, I was able to give these ewes and lambs very good care. The lambs were taken from the ewes in July and a ram turned with the ewes immediately and by the middle of the following February over thirty of them again had lambs. These lambs were all sold by June 1 as "hot-house" lambs and by the end of November about twenty of these ewes, or 45 per cent of the original flock, as I remember it, had again had lambs.

Since that time the flock of breeding ewes has been increased by buying from here, there, and everywhere a flock of aged ewes or ewe lambs, with occasional ewe lambs of our own raising from sheep that would not breed to have winter lambs, until it numbers about 160. With all of them we follow the practice of trying to breed a little earlier each year until we get the desired results.

Last fall and the year before we had sixty lambs dropped between September 1 and November 15, and forty or fifty between January 1 and February 10.

It has been our experience that after a ewe "gets the habit" of having a lamb in the fall she can be depended upon to have one at that season as well as at any other time.

Nearly all our ewes are the big, smooth-bodied Delaines and we have used Hampshire, Shropshire, Dorset, and Tunis rams with good results. The Dorset makes a splendid cross, but on account of lambs having large heads more watchfulness is required at lambing time. We have come to depend largely on the Tunis.

CARE AND FEED

If possible, the pastures should be so arranged that the ewes expected to lamb in the fall can run in a shed or basement during the heat of the day. While this is desirable for all sheep, we consider it especially so for sheep heavy with lamb. Right here I would say with emphasis that before lambing time the shed should be cleaned out and well littered with straw or similar material, for we have learned by costly experience that if new-born lambs have access to old, dry manure, or even to dust itself, they are almost sure to become infected through the navel and die.

If ewes are young and thrifty, through the summer they do not require so good pasture as those sheep that are suckling lambs; but when lambs dropped in the fall are two or three weeks old we turn them into good feed, preferably meadow, and later on the rape in the cornfields. The lambs make wonderful gains and we get many of them ready for market without feeding any grain, and it is on these lambs that the most money is made.

When the lambs are to be born later in the season the ewes should go into winter quarters in as good condition as possible and be kept that way by feeding a light grain ration until a short time after lambing, when the ration should be increased to anywhere from a pint to a quart per head daily, the quantity depending on the amount and quality of clover and oat-and-pea hay available. The ewes must be fed to give a large amount of milk if the lambs are to amount to anything. Roots will be of great value, both as a milk producer and in keeping the bowels in proper condition. Silage is an excellent substitute.

GRAIN RATION FOR LAMBS

Most feeders arrange a creep or feeding pen so that the lambs have access to grain at any time, and it is to be recommended. However, we have thought it better to feed the lambs regularly. When they are three weeks old they are put in the pen three times daily, giving them what grain they will clean up as follows:

One peck cracked corn.

One peck whole oats.

One peck ground oats.

Five quarts wheat bran.

Three quarts oil meal (old process).

The lambs will eat a quart or more each daily by the time they are large enough to kill.

DRESSING FOR MARKET

When a lamb weighs 55 pounds and is fat, it is fit for slaughter. The lamb is hung from a convenient hook by a stout cord fastened around the gambrel joints, and the throat cut. Clip off all belly wool from flanks to brisket and, with a moist cloth, wipe off dirt and grease on bare skin in flank. Open lamb from crotch to brisket. Before taking out paunch and intestines, remove caul and wrap it in a dry cloth to keep warm. The caul is easily removed in one piece by loosening first the edge attached to the paunch.

After taking out stomach and intestines remove gall bladder from liver and then open lamb from brisket to throat, taking out lungs and windpipe. In short, remove all the inside works except the heart and liver.

Place a spreader about 14 inches long straight across the back just above the kidneys and then spread the caul over the opening by catching it on a skewer stuck in the crotch, and on the ends of the spreader, making it in the form of a triangle.

We find it easier to handle the carcasses if we use a frame made of ordinary lath (Fig. 17) fastened to the back of the lamb with twine at gambrel joints and neck. Our commission man tells us that the lambs arrive in enough better shape to pay for the trouble and expense. We remove the feet, skinning from ankle to knee joint, and cutting off at the knee, thus leaving loose skin to tie up over the exposed ends of bone.

Wrap the lamb in muslin and then in burlap, sewing snugly, making a good stiff bundle. As lambs must be thoroughly cooled before wrapping up, we kill the day before shipping, usually killing Monday afternoon and shipping Tuesday evening by express.

MARKETING

We have shipped to one firm of commission men in New York City for years. When there is a good demand and our lambs are prime, we get satisfactory returns. Many of the large hotels in cities like Syracuse or Albany will buy these lambs.

Like everything else, the winter lamb business has its ups and downs. It involves little risk, yields quick returns, and does not call for expensive equipment in the way of buildings, labor, etc. The man who continues in the business, establishing the right kind of a flock and becoming familiar with the details, is the one who succeeds.

To the writer its chief advantage is in the elimination of the pasturing problem that goes with spring lambs, enabling us to keep a larger number of breeding ewes than we could otherwise. The lambs will sell for more at from twelve to fourteen weeks of age, than those six or eight months old. Those having fall or winter lambs, because of the heavier feeding and short suckling period, will shear more wool, which will pay for a portion of the extra feed.

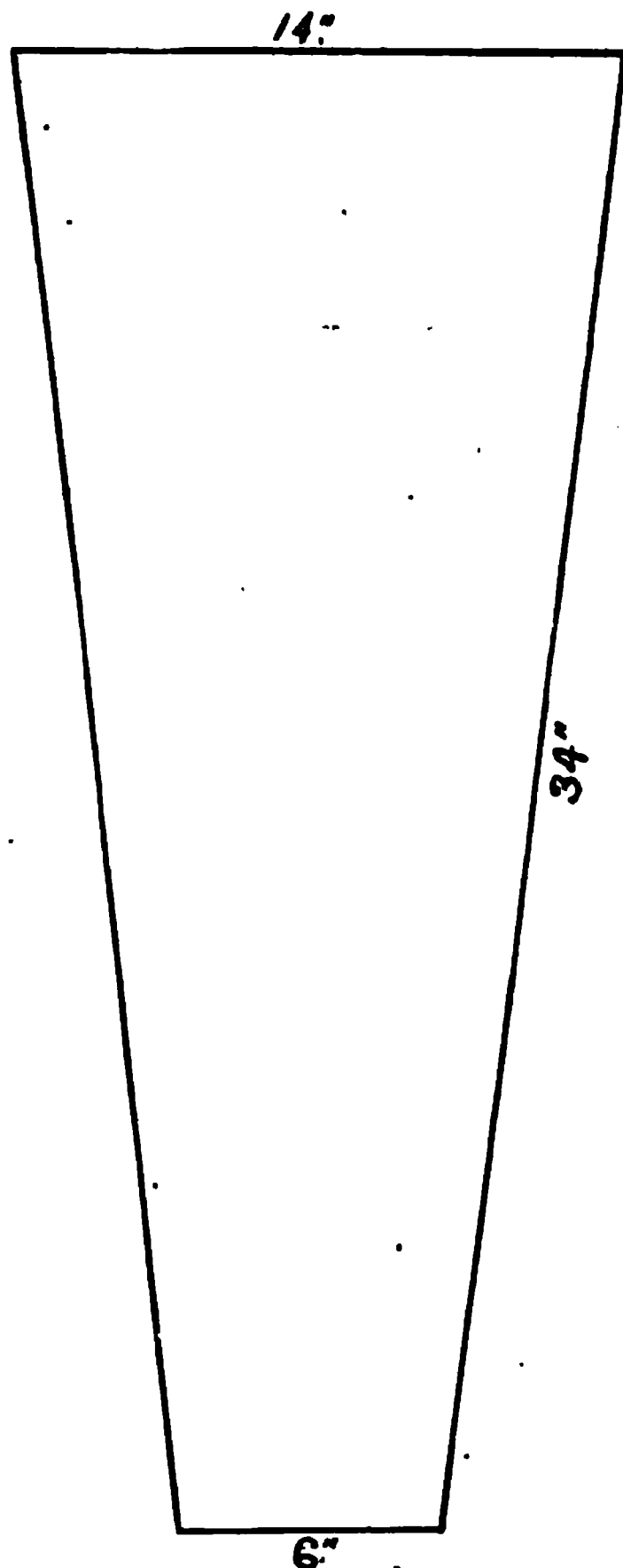


FIG. 17.—LATH FRAME FOR HANDLING CARCASS

WINTER FEEDING OF LAMBS

I. C. H. Cook, South Byron, N. Y.

Farmers' Institute Lecturer

The feeding of lambs during the winter months is a line of work particularly well adapted to the type of farming practiced in many parts of New York, fitting in well with heavy cropping of the land in the summer and giving work through the winter months, when high-priced help would otherwise be more or less idle. This method of maintaining fertility by feeding our roughage, also considerable grain, is preferred by many to dairying, since it requires much less investment for housing and equipment, and it releases the help for a longer day's work in the field through the summer months, thus giving a better distribution of labor. We find it is much easier to secure help with this type of farming than on farms where many cows are to be kept.

The fattening of sheep and lambs require the simplest and cheapest equipment of any of our meat animals, dry quarters and shelter from driving storms being about all that is necessary. In fact, the buildings may be very inexpensive and still meet all requirements, remembering that they must have good ventilation to prevent the collection of moisture — a very common and troublesome condition.

TYPES AND SOURCES OF SUPPLY

It is far safer to procure range stock for feeding purposes. These are known by several different names or terms — "Pony," "Madoc," and "Peewee" lambs — and they are often designated by the states from which they came, such as Idaho or Montana lambs, or Mexican and Colorado stock. These are very likely to be of a much hardier type than our native or eastern stock, and less suscep-

tible to disease or intestinal parasites than if grown in this part of the country. They are usually the result of a cross between fine-wool ewes and coarse-wool rams, giving a close, compact fleece of medium length, with a large frame for carrying a good carcass.

Several years ago this grade of stock could be secured for feeding in the Buffalo stock yards. With the gradual passing of the free range in the West, however, more and more of the finishing for market has been done in the West, and they have consequently been harder to get in our eastern markets, until now it is practically impossible to secure them in Buffalo — and indeed it is quite difficult to find them in Chicago. Kansas City and Omaha are more likely to have the right kind from which to select. The vast majority of the stock fed in western New York is made up of these range lambs, with now and then a bunch of yearlings or wethers. Feeders prefer the lambs to older animals because the lambs not only fatten, but grow as well, thus producing the double gain — growth and fat.

The most desirable type is a lamb weighing about forty pounds, well wooled over the whole body, with a compact, medium-length fleece. This grade is preferable, as experience has taught us that when too much blood of the Shropshire, Lincoln, Cotswold, or Southdown type is infused, giving us a more open-wooled cross, it is done at the expense of hardiness and vigor, and the lambs of that class arrive in weaker condition after their long haul from the West.

METHODS OF FEEDING

Probably 90 per cent of the lambs fed in this section are shipped in during November or the early winter, and are put into pens directly upon arrival. A carload of these small feeders usually means about 350 head, while the pens usually contain from 40 to 50 each. The lambs are taken out of the pens only occasionally for weighing. Many of the feeders have their own stock scales and weigh monthly to know just what progress is being made.

Occasionally a man may have some late fall feed, in which case he may prefer to run his lambs a few weeks on pasture. Should the pasture be clover, great caution should be observed in order to avoid bloating. They should be allowed to feed for a few days at least on some of the grasses, for these little fellows are nearly famished on their arrival and, if allowed to overeat on clover, there is sure to be

some loss. A light feeding of grain during this time is to be recommended, possibly using a self-feeder, with a mixture of oats, bran, and barley. However, there is more danger from overfeeding than from underfeeding, particularly on the start, and this raises one objection to the self-feeder.

At the start they should have very little grain — just a taste — largely of barley and oats. After they become acclimated and “on their feed” the grain may be very gradually increased, bearing in mind all the time that they should always eat all their grain quickly and be able to take just a little more if they were allowed to have it. They will then be much less likely to get “off feed” or have apoplexy than if overfed. While increasing the grain ration, some corn may be substituted for the oats. Salvage wheat is also added to the mixture if the price warrants it, as well as bran and oil meal or distillers’ grains. The latter are not so necessary if plenty of alfalfa or good clover hay is available. By the time the lambs reach 75 or 80 pounds in weight they should be receiving about 1½ pints of grain per day, and possibly more, and making a gain of from 8 to 10 pounds per month.

The roughage may consist of corn silage, following the grain feed in the morning — feeding both together is the practice followed by a few — and hay and bean pods alternating at night, after the second feeding of grain. If no pods are to be had, hay may be fed, always bearing in mind that alfalfa is best; medium clover a good second; mixed hay will do, or oats and peas hay; while timothy hay is very nearly worthless. Much the same type of feeding will apply to feeding yearlings or wethers, although, with less growth provide for, the oats might well be omitted from their grain ration.

GENERAL CARE AND ATTENTION

As the sheep is a very dainty animal, the good feeder is very careful to keep his feeding pens well bedded; he also uses great care that the feeding troughs or racks are swept out clean before every feeding of grain.

The water also should always be kept clean and pure in their pails, that they may enjoy it; even then, if they have running water they will soon learn to take it directly from the pipe into their

months. Salt should be kept before them at all times. A little tobacco dust mixed with it (about 5 per cent by weight) will help to keep them free from worms.

Lambs fed in an intelligent manner along these lines should double their weight in from four to five months; and, with the increased price of fat lambs or mutton over thin animals, should make a good profit. Besides, they give a good medium through which to run the roughage, thus converting it into valuable manure to aid in maintaining fertility, which is far better than to sell hay or other roughage at the expense of the soil.

Very frequently the stock from the West has been dipped, either in some of the yards enroute or before starting out on their long eastern trip. If not, however, they should be given attention during the early winter, in order that all ticks may be killed. If the weather is too cold for immersion, they may be placed on their backs in a small trough, and one of the various creosol dips used, of which Little's and Smith's are two of the standards. Open the wool along the belly and pour from a bottle evenly from one end of the animal to the other until it runs out from the wool on the back into the trough. Applied in this way, the liquid will follow the skin, instead of running off and being wasted as it would be if applied on the back while the lamb was standing up.

If the feeder has sufficient forage and cares to do so, he may very profitably clip these lambs or sheep in the late winter or early spring, preferably in March. This will very often rid them of any ticks that may have survived the dipping. It will also stimulate their appetite and cause them to make a more rapid gain during the coming warmer weather. The wool will come to a very tidy sum, usually shearing about six pounds per head, or better, and if the lambs are kept till May they will not sell for as much lower than wool lambs as one might naturally expect.

When in a finished condition, these lambs or sheep will command fancy prices in any of our large cities. But, when fed in carload lots, the best markets are found to be in those cities having large packing houses with market centers or stock yards where the big buyers come to look for the stock they desire. Buffalo is now recognized as one of the best live stock markets for fat stock in the country.

During the past winter of 1916-17, lambs could be secured early at about 10 cents per pound, while in the spring they sold all the way from 15 to 18 cents. We may therefore assume that with a cost of \$4 per head for a 40-pound lamb, and selling at 15 cents a pound — as was the case with the writer, the lambs having doubled their weight — the \$12 they brought paid the cost of feed and labor and left a handsome profit besides.

CONDITIONS AFFECTING THE WOOL INDUSTRY

A. C. BIGELOW

President, Philadelphia Wool-Textile Association, Philadelphia, Pa.



No better summary of sheep husbandry in our farming sections can be given than to quote the following remarks from *Sheep Farming in America*, by Joseph E. Wing:

“In America, sheep farming is little understood. Sheep are kept in a more or less desultory manner, having the run of some hill pasture or woodland, fed at intervals in winter, sold off when prices become low, bought up again with the return of higher prices, given small care or encouragement, often afflicted with parasites, internal and external, a side issue with the farmer, profitable in spite of his neglect, yet not often assuming the dignity of a business of themselves. There are several reasons for this state. It is in part a heritage of the days when sheep were little valued for their flesh and were kept mainly for their fleeces. It is in part a result of our once cheap lands and insufficient labor with which to till them. And in large part it is because of ignorance of profitable methods.”

SHEEP HAVE NOT HAD FIRST CONSIDERATION

As this extract states, sheep husbandry in America has been a pioneer development, without any attention to constructive development for the production of any well-defined type for a specific locality. One exception may be noted to this statement: There has been in certain sections in the state of Ohio an intelligent breeding of the strictly Merino type, and as a consequence, certain counties in the state have for many years enjoyed a reputation for producing a uniform and excellent grade of Merino wool.

Our sheep husbandry in this respect is very different from the development in England, where for hundreds of years sheep husbandry has been conducted on scientific lines. Each shire or county or district has evolved, through hundreds of years of careful breeding, a type of sheep especially suited to the conditions prevailing, and this development of breeding has been standardized, so that each shire, county, or district produces a distinct and uniform grade throughout its entire area. In other words, in England sheep husbandry has been developed scientifically, and has been recognized as an essential part of agricultural production, whereas in the United States it has been a side issue, and as such has suffered from incompetency and inefficiency.

RISE AND FALL OF THE INDUSTRY

The marked expansion of sheep husbandry in the United States began with the introduction of the Merino sheep in the early part of the nineteenth century, increasing rapidly first in New England, especially in Vermont. The tide of its development swept from the New England states across the continent until, in the northwestern states, it reached its maximum, in the first decade of the present century. About the year 1890 a decided decline began in the farming sections east of the Mississippi river, due largely to the severe competition of free wool from foreign countries, and from the cheaper production of the western ranges. Of late years this decline in the farming sections has been accelerated by the depredation of dogs. Immediately after the last census period — 1910 — there began a decided decline in the northwestern section also, caused by the restriction of the grazing area.

PRESENT CONDITION

At the present time the recent passage of the law opening 640-acre tracts of government land to entry has inaugurated a rush of farmers who are entering upon these tracts for farming purposes. A survey of this section now in progress shows that these farmers are making such inroads upon the range that it is evident there will be a very great reduction of production from this section during the next two years, because the western sheepman is obliged to get out of the business for lack of land on which to range his sheep.

Reliable records also show that flocks in the great sheep country of Australasia and South America have shown a material reduction, and there seems to be no prospect that there will be any decided increase from these sections. To add to the causes which have reduced the sheep population throughout the world, there must be included the undoubted destruction which has occurred during the military operations of the great war now in progress. While the sheep population of the world has thus been materially decreasing, the population of human beings, on the other hand, has been increasing. In the United States there are 103,000,000 people today, and the population of this country is increasing at the rate of 3,000,000 per annum. The situation thus outlined presents an opportunity for our farmers to return to a very profitable industry, from which they were driven out by the causes which have been previously noted. But our eastern farmer must understand that sheep husbandry will yield its full return only to those who give it intelligent management. In the great woolen mills the basis of profit lies in the volume of production and in its excellence. In these mills an old piece of machinery is thrown on the scrap heap. So must our farmers discard the slovenly methods of the past, and develop, by intelligent breeding, feeding, and care, the kinds of sheep best adapted to their locality, and those that will yield the best possible mutton and the best grade of wool.

It is fortunate that our farmers have today what they lacked before; namely — a source from which they can obtain competent advice and assistance for this purpose. The state colleges of agriculture and the agricultural extension service are now able to give them instructions and advice needed to develop the sheep industry on the proper lines. As the unit of the agricultural service is the county, it is most practical to advise that each county under the operation of a farm bureau agent shall cooperate to establish in each county a breed of sheep as nearly uniform as possible, and the best adapted to local conditions. This will take years of careful breeding, cutting out the poor stock, and a persistent effort to obtain a high standard.

WOOL MANUFACTURING

The wool manufacturing industry may be divided generally into three periods. The first includes the primitive pioneer manu-

facturing of homespun by the family, and what was then a slow and insignificant development of water-power manufacturing in the factory. The second period, covering that of the Civil War, showed a great expansion of this industry, caused by the tremendous demands of clothing for the armies. The third period, practically covered by the last forty years, has shown a tremendous development of manufacturing in this country, a natural result of an increasing population, combined with improved machinery, and a decided cheapening in the process of manufacturing.

The magnitude of the manufacturing interests of woolen and worsted goods of this country can be best understood by stating that they need 600,000,000 pounds of wool per annum to supply their needs of raw material. As the entire wool production of the United States amounts to only 288,000,000 pounds at the present time, it can readily be seen that to meet the demands for clothing for our population we are obliged to import a very large quantity of wool from foreign sources. In addition thereto, the mills are obliged to use a very large amount of inferior material, such as shoddy, waste, noils, cotton, etc.

As a natural consequence of the decided reduction of our domestic clip, and of the difficulty of obtaining wool from foreign sources on account of the present war, there has been a very decided advance in the cost of woolen and worsted goods. In general, it is the opinion of those who are competent to judge that there will be a shortage of wool supplies for years to come, and that, in consequence, the price of wool and all manufactures of wool will remain on a high level. It is well known that the civil population in the warring countries have been deprived of their usual quantity of goods in ordinary domestic wear, and it is quite evident that the demands for clothing from the civil population after the war will be tremendous, thus operating to sustain at a very high level the price of wool.

It is quite evident, as before noted, that on account of all these circumstances, the promise of the future is very satisfactory for those who maintain sheep upon the farm. It seems quite probable that even with a very wide extension of the industry in our farming sections, we can scarcely check the great decrease of production caused by the reduction of the flocks on the western ranges.

FIG. 18.—SHEEP SHEARING ON THE FARM OF JARED VAN WAGENEN, JR., LAWYERSVILLE, N. Y.

EFFECTS OF THE TARIFF

During the development of both the sheep industry and the manufacturing of wool during the last century, it was quite essential that there should be a tariff duty to protect our farmers and our manufacturers from competition from foreign sources. An adequate supply of so important a raw material as wool is of such importance to our people that it was a sound economic proposition that they should have a margin of safety, to insure them a reasonable profit.

In view of the fact that the wool-manufacturing industry in foreign countries had been developed to a high degree of efficiency, and was operated at an extremely low cost of labor and overhead charges, it was also essential that the manufacturing industry here should be protected from competition from such sources. As to the manufacturing industry and its cost of production, there is today still a great difference in the cost of production between domestic and foreign manufacturing, and it is vitally necessary to the interests of this country that it should receive an adequate protection to offset it.

As to the question of duty on wool at the present time, this is open to serious consideration. As prices for the meat and wool product of sheep will be maintained at a high level, it is quite probable that the sheep industry will not require the high rate of duties which it has obtained in the past. It must be recognized that market conditions fluctuate, and there might be temporary conditions prevailing for a time which would lower the price of foreign wools, and cause a discouraging competition from foreign sources. It would seem, therefore, that it might be advisable to have a very moderate duty placed upon wool, as a margin of protection under such circumstances.

As wool is a by-product today, and not the main feature of wool production, as it once was, the question of a duty on wool is not one which will now or in the future vitally affect this industry. In fact, it is probably safe to assume that the eastern farmer is justified to eliminate the question of tariff on wool as essential to a profitable maintenance of sheep. Let him direct his attention to improving his production, making the production of mutton the main feature of his operation, and the slight enhancement per fleece caused by duty on wool will be a negligible quantity.

COUNTY COOPERATION*

FLOYD S. BARLOW, Cooperstown, N. Y.

Farm Bureau Manager, Otsego County



The secret of the success of any organization can usually be summed up under two heads—an active membership and a definite program. This is true of the Otsego County Sheep Breeders' Association of the southern tier of counties in New York State. No farming enterprise presents greater possibilities for cooperative effort than the sheep industry, and it is with this belief in mind that we recount the activities of this organization.

The association was organized in the winter of 1915 as a regular part of farm bureau work. The method of begetting interest on the part of breeders was to persuade twenty of the leading breeders to desire the organization and to become charter members. Some were skeptical, as they knew of many an organization that had come to life only to die a premature death because of nothing for its members to do.

A DEFINITE PROGRAM

A definite program with a paid worker in the field has solved the problem. The object of the association is to promote friendly intercourse among its members, to increase the numbers and quality of medium-wool sheep, and to advertise the county as a center for breeding stock—in short, to make the business more profitable for those who are in it. Propaganda is not resorted to, because it is believed that a healthy growth can come only as a result of their success.

AN IDEAL FENCE AGAINST DOGS

The dog problem loomed up as the great obstacle at the outset and it was believed that with existing laws the dog-tight fence was the

*Published in the *National Stockman*, April, 1917.

only solution. It required most of the time of two meetings for the association to arrive at specifications for a fence upon which all could agree.*

SUCCESSFUL WOOL AUCTION

Probably the one accomplishment which has been responsible for increasing the association's membership to seventy has been the annual wool auction, which has been handled by a committee of three members. For two years past this committee has advertised the sales, which were conducted at the farm bureau office, for the fore part of June. The chairman of the sales committee acted as auctioneer in 1915, but the services of a professional were secured last year. Seven or eight buyers were present each year and the bidding was spirited. The first sale resulted in a price of 36 cents per pound on 15,000 pounds of wool. Growers that were not in the association sold at from 25 to 30 cents per pound. Last year 20,000 pounds was sold for 39½ cents, one of the highest prices paid in the East for medium wool.

It is estimated that these Otsego County growers made \$1,000 each year by their cooperative methods. Their cooperation is of the right sort. The grower who had 35 pounds of wool received just as much per pound as his neighbor who had 1,500 pounds. They fought no one. They simply eliminated wasteful practices. Instead of requiring the buyer to travel the county to secure small lots of wool from men who had little idea of its present market value, they invited him to a central point to buy. The price arrived at was a competitive one.

GRADING AND SHIPPING

Much has been said about grading wool that applies only to those sections where large numbers of sheep are found. As few or no eastern communities come under this head, we believe the Otsego method is in the right direction. Medium, as distinct from fine or coarse wool, has been sold with one-third off for cotted, black, or fine. These "rejects" show to the breeder in a very practical way the kind of wool not to produce. Shipments have been made at three points located on a trolley road traversing the county. Two days have been required to load. The buyer supplied two men and

*For practical decision on this question by this association, see page 27.

the association two. These men received the wool and weighed, sacked, and loaded it. The buyer paid each consignor on receipt of his wool.

LESSONS LEARNED

Many times knowledge of mistakes that have been made is valuable information. It is the belief of the Otsego association that they wasted considerable money in advertising too far from home, because their output is not large enough to attract distant buyers. The association, which is virtually an auxiliary of the farm bureau, because membership in that organization is required, has annual dues of only fifty cents. This would have been sufficient to care for postage, advertising, etc., had there been no expense connected with the wool sale. The coming season this expense will be met by the members at the rate of fifteen cents per one hundred pounds of wool or fraction thereof sold. In order that the decision of what shall constitute rejects shall not rest entirely with the buyer, the consignor will be privileged to take them home if he so chooses. This has not been a condition of sale heretofore. In order to protect responsible buyers, the purchaser will be required to deposit ten per cent of the purchase price of the estimated clip. The time at which wool shall be delivered has been reduced from "within four weeks" to "within ten days" of purchase. All conditions of the sale are to be advertised.

SEASON'S PROJECTS

Annual projects are formulated by this Otsego Sheep Breeders' Association which, when put into effect, make for the desired progress as set forth in their constitution. Categorically they were for 1917 as follows:

1. A winter meeting with C. W. Larmon of the State Department of Agriculture as principal speaker to explain the provisions of the proposed new dog law.
2. An auction sale of wool as above described.
3. An automobile tour of the members and their friends to visit from three to five flocks of sheep, some time in June.
4. A wool contest, provided there are at least fifteen members to exhibit samples at one of the county fairs.

5. A plan to increase the number of breeding ewes by connecting up those who wish to buy with those who have good ewe lambs which would otherwise go to the block.

6. An exhibit as an association at the county fairs, including animals, a tent for headquarters, literature, etc.

7. A questionnaire sent all members on November 1 to determine status of industry and to establish progress, if any be made.

Project No. 1 has been completed and the association has sent a resolution to their state representatives endorsing the dog law. Project No. 5 is one that should be far-reaching. The Otsego breeders are not anxious to import western sheep on account of parasites or parasitic diseases; hence they propose by means of a circular letter to learn which of their numbers have ewe lambs that will be disposed of on the fall market. All such members will be visited by Day Taylor (Pinehurst Farm), Joe Mumford (Iroquois Farm), or some other shepherd of repute, in company with the agricultural agent. Selections will be made, prices secured, and buyers found.

Developing the sheep industry through organized effort in the eastern states, in those counties with hill lands, might well become a leading enterprise of many of our farm bureaus. Several other counties in New York State, including Essex and Delaware, have already begun.

SHEEP AT THE NEW YORK STATE FAIR

FRANK D. WARD, Batavia, New York

Formerly State Fair Commissioner and General Manager of Live Stock



In the last speech of his life, delivered at the Pan-American Exposition, our martyred president, William McKinley, appropriately characterized industrial exhibitions as "timekeepers of progress." They are such, and more, for the boards of managers of these exhibitions have, as a rule, succeeded in making them educational institutions of great value, not only to these who till the soil, but to all classes of people.

With this end in view they have been encouraged by liberal appropriations of public funds, the representatives of the people rightly believing that money judiciously used in encouraging our state and large local exhibitions should result in great benefit to every class of people; that exhibits of the products of the farm, orchard, and dairy should so show the results of efforts of the farmer, the orchardist, and the breeder that they should stand forth as an object lesson of lasting influence and value beyond computation.

PERSONAL EXPERIENCES

My first personal experience as an exhibitor was when I was but a lad in knee-breeches, and when I won every first prize in the class at our county fair on a coop of rabbits. Before I was old enough to vote I owned a flock of pure-bred Cotswold sheep that I exhibited at local shows, at which was fairly successful in winning prizes. But one of the chief milestones in my career as a sheep breeder was the State Fair in Elmira in 1872, where I was an exhibitor of Short Horn cattle, and where "Dick" Gibson of Delaware, Canada, had on exhibition the first lot of high-class Lincolns I had ever seen.

They were a picked lot, the choice of a recent importation of thirty-two head from the flock of Dudding Bros., in England, and were said to have cost the enthusiastic importer \$3,500. This importation of Lincolns was the most important that had ever been made to this country and did much to popularize the breed in America. Another exhibit at this same show was a flock of Cotswolds, which I admired even more than Gibson's Lincolns. The veteran Cotswold breeder, John D. Wing, of Dutchess County, was in England at the time of the dispersion sale of Robert Lane's celebrated flock, at North Leach. Mr. Wing purchased his choice of about forty rams and ewes for export to this country, and selections from this importation were at Elmira at this same show.

I doubt whether I ever had as great a struggle to keep from breaking the tenth commandment as when I saw this lot of sheep. The fever ran high and "I saw visions, and dreamed dreams." The tension was relieved somewhat before the close of the fair, when the entire lot of ewes were purchased by Hon. James W. Wadsworth of Geneseo, and in partnership we bought the first prize shearling ram from the same flock. In August of the following year I purchased the entire lot of ewes and their lambs from Mr. Wadsworth and made my debut as an exhibitor of sheep at the State Fair in Albany in 1873. From that year to the present I have been in close touch with the sheep department—for many years as an exhibitor, also as an official or an interested visitor.

When I first entered the ranks of exhibitors in 1873 the classes were quite limited as compared with present classifications. The usual exhibitors of Lincolns were Wolcott & Campbell of New York Mills; Leicesters were shown by Jurian Winne, of Albany County; Cotswolds by John D. Wing, of Dutchess County, Joseph Harris, of Rochester, H. K. Burroughs, of Delaware County, and Jacob Albright, of Tompkins County. In addition to the above exhibitors of long-wool sheep there were occasional exhibits from Canada, one of the most prominent exhibitors being the late John Snell of Edmonton, who was recognized as being one of the leading breeders of Ontario.

Southdowns were the only middle-wool breed shown at that time and the usual exhibitors were John Hobart Warren, of Hoosick Falls; Samuel Thorn, of Washington Hollow; James O. Sheldon, of Geneva; and Walter Cole, of Batavia.

ADVENT OF THE DOWNS, CHEVIOTS, AND DORSETS

Several other breeds prominent in the prize lists at this time were practically unknown and not considered as of enough importance to justify classes in the prize list. Among these were Cheviots, Shropshires, Hampshires, Oxford Downs, and Dorsets, as well as Rambouillets. In later years, therefore, we find exhibits originating from a wide range of territory, including France, and Dorsetshire, Wilts, Hants, Sussex; and Kent in Southern Britain, as well as several of the central shires, also the Cheviot Hills and the braes of Ballancoyle.

The first flock of Shropshires I ever saw was at the State Fair in Rochester when a prominent farmer from our own county, and one in whose judgment I placed great confidence, came to the pens where I was showing Cotswolds and asked me to go with him and look at the best lot of sheep he had ever seen. They were large and coarse, but with great quarters and backs; their faces were a coarse, rusty brown; and their heads were bald, the ram having stubs of horns. They were big, useful sheep, and won all first prizes in their class (there was no competition), but this same lot of sheep would disgrace the breed at any county fair today.

The early exhibits of other so-called new breeds were on a par with those Shropshires. Hampshires and Oxford Downs were inclined to be coarse, while Cheviots and Dorset Horns were quite uniformly light in shoulders and through the heart. In many instances the chief merit of some of these new breeds seemed to be that they were a novelty.

IMPROVEMENT AND INCREASE IN CLASSES

Keen competition at the large shows, and demands of an exacting public brought about rapid improvements in quality of sheep to be seen at the state fairs, as well as adding quite materially to numbers shown, until in 1890 (the first year the State Fair was held on its permanent grounds at Syracuse) there were ten separate classes, with provisions for cash prizes for "Any other pure breeds." This list called out a total of thirty-one exhibitors, all but two of which were residents of New York State.

After the reorganization and the placing of the management under control of a state fair commission in 1900, the prize list

was enlarged to meet the requirements of breeders of every recognized breed of value. As a result there were on exhibition forty flocks from eight different states and provinces. Every pen in the sheep barn was full to overflowing, and the commission was obliged to build nearly one hundred new pens under canvas to house properly the unlooked-for exhibit.

Through the liberality of the commission, who have realized the importance of this department in making the annual exhibitions of interest and benefit to the public, prize lists have been still further increased with a resultant increase of exhibits, until the sheep department at Syracuse is recognized as being equal to any in this country, both as to quality and numbers shown. Breeders of different states meet here and vie with each other in the show ring; while an interested, intelligent public study breeds and types in an endeavor to learn which breed or type may best meet their farm and market conditions.

The number of entries and the amount of awards for the past two years are shown in the following table:

Year	Total entries	Total awards
1915.....	875	\$5,630 50
1916.....	792	4,850 00

AN EDUCATIONAL INSTITUTION

It is a great educational institution where practical object lessons are constantly before the public eye. And not alone the visitor receives an education, but the exhibitor — if he be alert — has a rare opportunity to weigh public opinion as to the merit — or lack of merit — to be found in his flock.

As an exhibitor I suppose I sometimes became overconfident and thought I knew all about the science of breeding, fitting, and showing sheep; but I recall instances where plain farmers amongst the visitors convinced me that I was "on thin ice." And here is an exceptionally good opportunity to look at things through other people's eyes, for honest criticism should always be a mighty stimulus to better work.

LATER-DAY IMPROVEMENTS

I doubt whether breeders of any class of live stock have made greater progress in the same length of time than have the breeders of sheep.

Take as an example the South Downs, and they are fairly representative of each of the other mutton breeds. An early authority describes them as being "of small size and ill-formed, having long necks, being light in the shoulder, narrow in the chest, coarse in bone, but having a big leg of mutton. The fleece was light, weighing only 1 to 1½ pounds. They had horns and spotted or gray faces, and did not reach maturity until from four to five years of age. A present day authority says of this same breed: "In the typical South Down is seen almost absolute perfection of form. There is a plumpness, a beauty of finish not surpassed by any other breed of sheep. The head is fine and deer-like in appearance, without a trace of horn, the poll forehead and cheeks being well covered with clean, white wool. The neck is short, strong, and nicely tapered from the head to a thick, smooth setting on the shoulders, which, with the chest, back, and loins, must be wide and smoothly turned. The quarters are particularly full well down to the hock, and in the whole make-up of the sheep there must be no coarseness. The fleece should be extra fine in quality, very dense, and weigh at least six pounds at a year's growth." What an improvement, not only in type but in value and adaptation to present-day demands! As already stated, this transformation in type finds its duplicate in every other of the improved breeds of sheep.

And there is no one influence that has been so strong a factor in the improvement of breed type as have been the large fairs where breeders have congregated their flocks for comparison in the show ring. This is the place, where, above all others, we are forced to discard ideas or prejudices we may have formed and yield to the force of public opinion.

COMPETENT JUDGES

The management of all our large exhibitions have realized the wisdom of employing men as judges of live stock who have had much experience in breeding — men of sound judgment, who are

competent to understand correct types, who have the courage to place awards where they belong, and who have intimate knowledge of the past history of this, and other large fairs. I may say that I have never known a fair association where greater liberality has been shown in the selection of competent judges of live stock than has been shown by the New York State Fair Commission.

The education of the farmer is not all gained as he studies the awards as they are made in the show ring. I wish I could know how much time I have spent at fairs sitting on a feed trough or a bale of hay and talking with visitors as to breeds, types, or adaptability of certain breeds of sheep to varying farm and market conditions.

STRIFE FOR PREFERENCE

As I recall State Fair experiences of years ago, there was a deal of strife betwixt breeders as to classifications and amounts of money apportioned to the different breeds. It is doubtful whether the herdsmen of Abraham and Lot ever scrapped more fiercely than did the sheep men of those years. Exhibitors of the mutton breeds claimed that the Merino breeders had no just claim to three classes for one breed, where money prizes totaled \$480, while each of the mutton breeds were offered only \$140; and the breeders of Merinos met us with the taunt that in the case of the mutton breeds there was a distinction without a difference and that, really, all the long-wool breeds should be placed in one class, and all middle-wool breeds in another class. These "scraps" are only a memory, and those of us who are alive and remain are all good friends now.

MERINOS AND THEIR SUPPORTERS

As regards numbers of exhibitors and of entries, the various subdivisions of the Merino class were clearly in the lead. American Merinos were usually shown by Lusk & Townsend and by Warren J. Tyler, of Genesee County; Marriner & Bronson and J. P. Ray, of Ontario County; and Peter & George Martin, of Monroe County. Delaine Merinos were shown by Major Davis Cossitt, of Onondaga County, and Kenyon Brothers, of Washington County; while Silesian Merinos were imported and shown by William Chamberlain and Carl Hayne, of Red Hook, Dutchess County.

FIG. 19.—AN EFFICIENT SUPERINTENDENT, LEVI A. PAGE

Within a few years the demands of markets for a better class of mutton resulted in importations of the various breeds of mutton sheep, and a consequent enlargement.

Since I have the opportunity, I want to say that at heart I have always admired the pluck and persistency of the breeders of Merino sheep. Those exhibitors with whom I became acquainted at the Albany fair in 1873 swore by their idols and stayed by their guns as long as they lived, and this same spirit of stick-to-itiveness has been a fixed characteristic of all Merino breeders. In this way they have accomplished more in the development and maintenance of correct breed types and thus in popularity of the breed than could have been possible otherwise. All honor to the man who knows he is right and is willing to count but one, while the crowd goes the other way!

AN EFFICIENT SUPERINTENDENT

This story of sheep at the State Fair would be altogether incomplete were I to fail to mention the part played by the superintendent who has been in charge of this department for the past twenty-eight years, and who, more than any other man, is to be credited with the high degree of efficiency that has always been maintained. I first met Levi A. Page when I was an exhibitor at Syracuse in 1890; and, as I recall, I exhibited under him nine years. Then as a commissioner, and following this as general manager of all livestock departments for ten years, I became intimately acquainted with him.

Page can put more diplomacy into a day's work on a fair ground than any other man I ever knew. There are always knotty problems to be solved and controversies to be straightened out during the conduct of a large fair like the one in Syracuse, and when these matters came up to me I usually dodged over into one of the other departments and left them to Page. When I came back an hour or two later, every one was wearing a smile, the trouble was adjusted and Page always had his own way; but his diplomatic methods were so smooth the trouble-makers never knew they were beaten at their own game.

As an exhibitor and as judge at very many state and sectional fairs, I have become well acquainted with a great many superintendents of live stock; but the most capable and efficient man for such a position I have ever known is Levi A. Page, of Seneca Castle.

SLAUGHTERING AND MARKETING MUTTON AND LAMB

PROFESSOR K. J. SEULKE

Department of Animal Husbandry, Cornell University, Ithaca, N. Y.



Sheep can be slaughtered and dressed on the farm with less equipment and in a shorter time than any of the other farm animals. This being the case, it is surprising to find that very few sheep and lambs are dressed on the farm, even in the districts surrounding our larger cities, where the farmer may market his surplus stock in a dressed condition and thereby add considerably to the price received for the animal. This work not only comes at a season of the year when there is not a great deal of other farm work, but it also serves as a means of marketing one or two animals at a time, where the breeder has a small flock that will not permit of his shipping in carload lots. Again, certain classes of lambs, of which hothouse lambs are an example, are practically always sold dressed; and, since the price is remarkably high (\$9 to \$15 per head, at a weight of 50 pounds) the style and quality of dressing influences the price received to a considerable extent.

STYLES OF DRESSING

There are two principal styles of dressing mutton and lamb, all others being merely modifications of these.

Plain or Round Dressing

Plain or round-dressed lambs have the pelt, head, and toes removed. The internal organs may be entirely removed, with the exception of kidneys and kidney fats. In this case the midline of the carcass is split from the udder or cod down the center of the abdomen, through the center of the breast bone to the throat. Cross sticks are put on, spreading the ribs of the animal.

Plain round dressed lambs are also dressed "pluck in." In this case the adominal wall is opened from cod or udder to the breast bone and the abdominal organs, with the exception of the kidneys and liver, are removed. The organs of the thorax and the liver are left in and a short spread stick is placed on the inside of the carcass. Lambs are usually dressed "pluck in," and sheep "pluck out."

Plain or round dressing is the style of dressing commonly used when the animal is slaughtered for home use or when the carcass is to be sold to a local market or retailed by the farmer himself. The manner of removing the pelt, etc., in this method will be discussed at length in the following pages.

Pelt-on Dressing

Another method that is used in the case of the lightest lambs and especially in the case of hothouse and early spring lambs is pelt-on dressing. In this method the pelt is left on and the head, toes, and abdominal organs, with the exception of kidneys and liver, are removed. The breast is not split and the pluck (heart, lungs, and trachea) are not removed. These lambs are practically always cauldressed, as are also the lowest grades of sheep and all but the best grades of lambs. By caul-dressing we mean draping the caul or fatty membrane, which surrounds the paunch and intestines, over the opening in the abdomen and wrapping it about the hind legs. A detailed description of pelt-on dressing will be given in the following pages.

PLAIN OR ROUND DRESSING

Select the animal to be slaughtered, being sure it is healthy, thrifty, and fat, and of the desired age. Lead or carry it to the place where it is to be slaughtered without bruising or pulling the wool, as this will cause a blood clot to form on the outside of the carcass, where it will mar the appearance and may cause early decomposition.

Sticking

Lay the animal on its left side on a low box or table and place your right knee on the flank of the animal to hold it down, with your left knee behind the neck of the animal. Then, grasping the nose of the sheep with the left hand, draw it back so that the trachea

FIG. 20.—LAMB PROPERLY HELD FOR STICKING

and arteries are pushed to the front of the neck. Insert a six-inch sticking knife at the angle formed by the jaw and the vertebrae of the neck just in front of the ears. Stick completely through the neck and then cut out to the front of the neck so that a heavy flow of blood is obtained.

Lay aside the knife where the animal's feet cannot strike it and, retaining the grasp on the nose of the sheep with the left hand, grasp the topknot of the sheep with the right hand. By a quick downward thrust of the right hand, accompanied by an upward pull of the left, snap the spinal cord at the atlas joint, thus rendering the animal insensible to pain. Hold the animal until all kicking stops and allow it to bleed out.

Opening the Pelt

After the animal is bled lay it in a clean place on the floor. Standing at the left side, facing the head, draw the left foot backward to bring the front side of the leg uppermost. Place the foot of the animal between your knees in order that both hands may be used in skinning. With a skinning-knife remove a strip of pelt from the front of the leg, beginning over the knee and cutting down to the toes, leaving it attached at that point. Inserting the skinning-knife blade upward and heel low in the opening just made, continue the cut down the front of the upper leg to a point about four inches in front of the brisket. Repeat this with the right leg. When the two cuts meet in front of the brisket, continue the cut down the front of the neck to the cut made in sticking the sheep.

Care should be exercised at all times, in opening the pelt, to see that the "fell," or thin membrane between the meat and the pelt, is not cut. If this is cut to any extent the meat will project through and mar the appearance of the carcass.

Next, face the rear of the animal, standing at the right side; and, after drawing the right hind leg forward and placing the foot between your knees, remove a strip of pelt from the back of the leg from over the hock to the toes, leaving the strip of skin attached at this point. Inserting the knife in this opening at the hock with the sharp edge upward and heel low, and open the pelt down the back of the hind leg to the vent. Repeat this operation with the other hind leg.

Before proceeding further wash your hands thoroughly in hot water to remove all of the grease of the fleece. Since this grease is the principal cause of the strong, rancid taste in mutton, care should be exercised at all times not to touch the carcass with hands that are dirty or that have previously touched the fleece.

Before the pelt is opened down the midline a strip is fisted through over the breast, abdomen, and twist in the following manner: Grasping the triangle of pelt in front of the brisket with the left hand and placing the right foot on the head to hold it down, pull upward on the triangle of pelt so that the breast is skinned. Then, with the fingers of the right hand doubled in and the knuckles upward, fist a strip of pelt four inches wide down the midline to the navel by pressing the meat away from the pelt.

Going to the hind end of the sheep, the triangle of pelt over the twist is raised in the same manner and a strip four inches wide is fisted down the midline until it meets the one from the front.

The sides of the hocks are then skinned out and a slit is made between the tendons and the bone of the shank. The toes of the hind feet are cut off and, after the hind legs are securely tied by passing a heavy cord through the cuts behind the tendons and tying it around the legs, the carcass is ready to hang up. Hang the carcass by the hind legs so that the head clears the ground by about a foot.

The last step in opening the pelt is to slit the pelt down the midline of the opening made in fisting from vent to throat.

Fisting Off the Pelt

When the pelt is opened the skinning-knife may be used in loosening the vent, after which the knife may be laid aside, as the pelt is entirely removed from this point by fisting. Begin fisting off the sides by starting over the ribs and going directly around the carcass for a distance of six inches. Fist from this point up the sides and around the outside of the hind legs and around the dock of the tail. Then beginning over the ribs again, work downward behind the shoulders, removing the pelt from the shoulders and front legs.

Standing behind the carcass and grasping the pelt that formerly covered each leg, pull downward so that the pelt strips off the entire carcass down to the neck. The head is cut off at the atlas joint,

FIG. 21.—METHOD OF FISTING

being left on the pelt for a time. The front feet are taken off by cutting through the toe joints in sheep or by taking them off at the break joint in lambs. In the latter case the tendon on the back of the front leg is cut across between the foot and knee and the leg is broken at the break joint by a quick twist backward.

The head is next skinned out of the pelt and the tongue taken out for food purposes.

Eviscerating

The extent to which the midline of the carcass is opened depends upon whether the carcass is to be pluck-in dressed or not. As previously stated, if the carcass is to be dressed pluck-in, the abdominal wall is opened from in front of the cod or udder to the breast-bone and all abdominal organs are removed with the exception of the kidneys, kidney fats, and liver. The gall bladder is removed from the liver and a short spread stick is placed in the carcass.

If the carcass is dressed pluck-out, the abdomen is opened from cod or udder to the breastbone and the breastbone is split to the throat. Back sets are put in to spread the carcass, and the caul may or may not be draped on.

PELT-ON DRESSING

In pelt-on dressing small lambs, the animal is stuck in the same manner as described in round dressing. The pelt is not opened on the legs, but the toes of the hind leg are taken off at the toe joint and a slit is made through the pelt behind the tendons on the shanks. The front feet are taken off at the break joint and enough loose pelt is left to tie over the end of the bone.

The pelt is opened from the rear end of the breastbone down the center of the abdomen over the twist to the vent and a strip of pelt about two inches wide is removed from each side of the cut in order to keep the carcass clean.

The abdominal wall is opened down the midline from in front of the cod or udder to the breastbone, and the caul or fatty membrane surrounding the paunch and intestines is removed in one sheet and preserved for later use. The hind legs are then tied together, the carcass is hung up, and the head is cut off. The vent is loosened and the abdominal organs are all removed with the exception of the kidneys and liver. The gall bladder is removed from the liver. The

caul should then be draped over the opening of the abdomen, in which a short spread stick has been inserted and passed back between the hind legs. After cooling, the caul becomes hard and brittle and will not come off the carcass when handled.

FIG. 22.—PELT-ON DRESSED LAMBS READY FOR WRAPPING

MARKETING DRESSED CARCASSES

If the farmer is located so near a large city that carcasses shipped one evening will be on the market by the time of its opening the next morning, he may add materially to his returns from his sheep by marketing the surplus in a dressed condition.

As previously stated, all but small lambs are plain round dressed while the latter are pelt-on dressed. In either case the carcass should be thoroughly cooled (not frozen) after slaughtering. In preparing the carcass for shipment it is wrapped in clean cheesecloth, and a clean burlap bag is sewed over the outside. The carcass is then tagged and shipped by express. No inspection is necessary at the point of slaughter, as this is done at the market. The shipper must, however, fill out a blank stating that the animal was healthy and sound. This blank is given to the express company with the carcasses.

When shipped to a large market, dressed carcasses may be sold in either of three ways. They may be sold directly to the consumer, who is usually one of the large hotels. The hotel may contract the entire crop at a fixed price or may pay market prices. In the case of hothouse lambs, the hotels of New York City are glad to give contracts to farmers for their entire crop, provided they will guarantee to supply a certain number; and they often pay a premium above the regular market price to men who are producing extra fancy lambs. This is the most desirable method of marketing entire carcasses, as it eliminates all middlemen and the producer receives the price paid by the consumer minus the express.

FIG. 23.— PELT-ON DRESSED LAMBS, WRAPPED AND TAGGED,
READY FOR SHIPMENT

Another method of selling on the large market is through a reliable commission man. This is a desirable means of marketing for the man who is unable to obtain a contract. The third method is selling the carcasses to the retail butcher in the large city. The principal objection to this plan is that the meat does not bring so high a price on the average, because there is no competition of buyers. This is offset to a certain extent by the fact that there is no commission man to pay.

If the farmer has only a few animals to market and is located too far from a large city to ship the dressed carcasses, he may round-dress the sheep and sell them locally either to a retail butcher or to the consumer direct. The latter method will obtain the greatest returns. Lamb, due to its light weight, may be sold in quarters; but mutton is usually so heavy that the average family can not use an entire quarter. In the latter case the producer must cut the carcass into retail cuts, thus making the business more complex. However, this is entirely practicable and requires few tools or other equipment.

In whatever form or by whatever method the farmer markets his surplus sheep, it is well to remember that this last step in live-stock production is important and that a thorough knowledge of markets, etc., is absolutely necessary to the greatest possible success or profit in live-stock production.

METHODS OF CUTTING MUTTON AND LAMB

Wholesale Cutting

On the wholesale market mutton and lamb are sold in four forms — whole carcasses, racks and saddles, quarters, and minor wholesale cuts.

When the carcass is divided into rack and saddle the carcass is divided between the last two ribs, the two fore quarters being left together for the rack and the two hind quarters together for the saddle.

When a mutton is quartered the carcass is first split down the center of the backbone, thus separating the two sides without cutting into the meat. Then the hind quarter is removed from the fore by cutting behind the last rib. If the hind quarter is to be held for any length of time it will be well to cut between the last two ribs, leaving one rib on the hind quarter to support the flank. This is the method of cutting that the farmer will be able to use in selling small lamb carcasses directly to the consumer.

Minor Wholesale Cuts

If the farmer wishes to retail heavy lamb or mutton carcasses he will find it necessary to separate the carcass into the minor wholesale cuts in the following manner and then divide each into the retail

FIG. 24.—THE FINISHED CARCASS

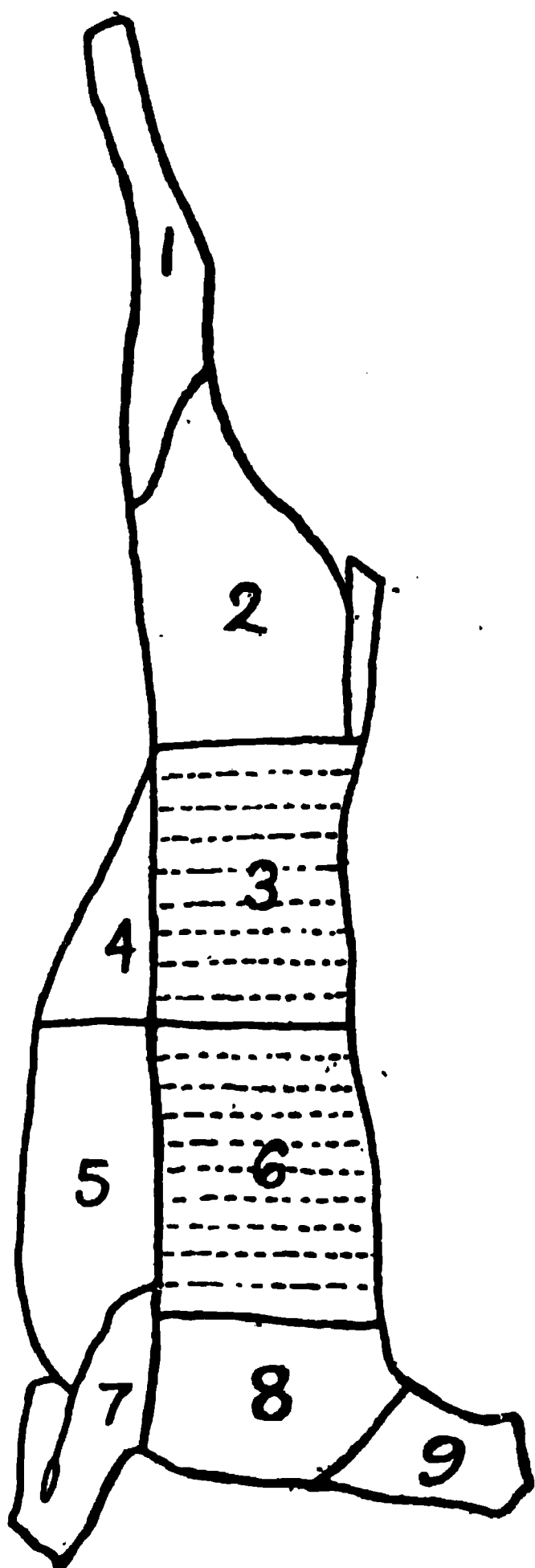


FIG. 25.—RETAIL CUTS OF MUTTON

1, hind shank; 2, leg; 3, loin (chops); 4, flank; 5, breast; 6, rack (rib chops); 7, front leg; 8, shoulder; 9, neck

cuts as described later in this section. In cutting a carcass into the minor wholesale divisions, it is first split into halves by sawing down the center of the backbone and breast.

Lay the side of mutton on the block with the outside upward and remove breast, flank, and front leg (see diagram) by starting at the cod or udder and cutting in a straight line to the hollow between front leg and shoulder. Remove the neck so as to make the shoulder as square as possible. Cut off the shoulder between the second and third ribs, leaving two ribs in this piece. Separate rack and loin by cutting behind the last rib on the rack. Last of all separate the leg of mutton and loin by cutting across the hip at a point at about the center of the rise in the backbone. These various cuts are then trimmed and divided into retail cuts as described in the next paragraph.

Retail Cuts

After the side of mutton is divided into the minor wholesale cuts it is ready to be cut up for retail trade. First, the front leg is removed by splitting it from the breast. The shank is cut off at the knee and the legbone is cut across to facilitate carving. The breast is

turned on edge and the breastbone is clipped with a cleaver in a number of places so that it may be more easily rolled for roasting.

All bloody portions are cut from the neck. The bloody portions and glands are removed from the inside of the shoulder and it is left whole for roasting, although it may be cut into chops if desired. The rack may be left whole for a roast or cut into chops for frying. If it is to be used for a roast, the connections between the vertebrae of the spinal column are clipped with a cleaver and the ribs are cut across with a saw about two inches from the tip.

If the rack is to be used for chops it is cut between each rib, making each chop about one inch in thickness.

The loin is practically always used for chops. These are cut about an inch thick, care being exercised to have them of an even thickness.

The leg is left whole for a roast and is trimmed by removing the tail bone and shank and by cutting the connective tissue over the knuckle.

If the farmer expects to sell his mutton and lamb directly to the consumer he must remember three things:

1. An attractive product needs little advertising.
2. Sharp tools make tender meat.
3. Cleanliness is next to godliness.

MARKETING LIVE ANIMALS

The farmer who has a carload or more of sheep or lambs to market each year and who has not the time or is not located conveniently near a good market, so that he can slaughter and sell his surplus directly to the consumer in dressed condition, will find it to his advantage to market his sheep alive by the carload, selling either directly to the butcher or packer, or through a reliable commission firm. Taking all things into consideration, the net price received will be higher if he ships to one of the larger markets in the state and sells through a reliable commission man that knows the market and buyers thoroughly and whose future business is dependent upon his ability to sell the farmers' stock to advantage.

The farmer who has not a full carload of sheep or lambs, but who can make up a mixed carload of sheep and hogs, or sheep and cattle, will do well to market his stock in the same manner, provided it is not convenient for him to market the animals

dressed. If a mixed car of animals is shipped, the various classes of animals should be confined separately. The hogs and sheep, especially, should never be loaded without partitioning off the car and keeping them separate.

Where a number of sheep breeders in a community can ship cooperatively, this also provides a means of marketing the small flock. Each man's sheep should be marked differently from his neighbor's and a list should be sent to the commission man, in order that he may sell and return the money from each man's sheep separately.

THE VALUE OF MUTTON AS A FOOD

IDA S. HARRINGTON, Albany, N. Y.

Farmers' Institute Lecturer



There is a mistaken idea in the minds of many people that mutton has less food value than beef. Probably this has come about through the references in books to the "ruddy countenances" of men whose good fortune it was to be generously fed on "good English beef." For some reason mutton has not been given a fair deal in literature, and the Christmas shoulder of mutton — just as typical as the historic boar's head — has made little ap-

peal to the imagination.

As a matter of fact, mutton has practically the same nutritive value as beef, and the composition of the two meats is about the same. There is no more waste in mutton than in beef, and we get as much protein from the one as from the other. Because of its higher percentage of fat, mutton is the better investment, so far as energy value is concerned. Mutton is easily digested, as is proved by its wide use in invalid dietaries. A further argument in favor of mutton is that the carcass is of a convenient size for handling and storing.

In spite of all these advantages, mutton is regarded with prejudice by a great many people. Their dislike is probably based on the fact that they have been asked to eat mutton that was below standard quality. Not enough attention had been given to breed and feed; the carcass had not been carefully dressed and stored; and especially the necessary details had been overlooked in preparing the meat for the table.

THE TESTS OF GOOD MUTTON

It is not the province of the writer to discuss breeding and feeding, since both points have been covered by experts. Nevertheless,

the best cook is helpless, or largely so, if asked to evolve an ideal roast of mutton from an animal not bred nor fed for the purpose. The tests of good mutton are: small bones; plenty of firm, white fat (since the meat from a lean animal is of inferior grade); and fine-grained, deep red, firm, juicy flesh.

FLAVOR AND TENDERNESS

The flavor of mutton depends not only on breed, sex, age, and feeding, but quite as much on the conditions under which it is "ripened." It should hang in a dry, cool place long enough so that the bacterial changes in the muscles may make them tender. In winter weather it is safe to continue the ripening process for from three to six weeks, provided conditions are such as not to impair flavor. Meat spoils rapidly in a damp atmosphere, and is never so juicy if allowed to freeze. Dressed mutton is very easily tainted by absorbing foreign odors and flavors. The characteristic mutton flavor is centered in the fat and the pink outer skin. This may be very much modified in cooking, as will be shown.

CUTS OF MUTTON

Mutton may be cut into sides and divided into fore and hind quarter, or so divided that the two fore quarters form one piece, and the two hind quarters the other. The cuts in the back half are the leg and loin, and in the front half the rack or ribs, breast, shoulder, and neck. The two loins, if left together, form the saddle. The leg and loin, left together, are called the haunch. Ribs and loin, left in one piece, are spoken of as the rack.

MINOR PARTS USED FOR FOOD

Feet — Sheep's feet have not been valued as have calves' and pigs' feet; but, like the feet of all animals, they are rich in gelatin, and therefore valuable in the preparation of soups. They may also be boiled and pickled, or used in stews.

Head — The head may be cooked whole and the meat removed and made into a scalloped dish.

Heart — The heart may be stewed, baked, or braised (cooked very slowly in a closely covered dish in the oven, with a small amount of liquid).

Brains — The brains may be boiled and afterwards fried.

Liver — If the liver is in a healthy condition — that is, if it is free from streaks or spots, it may be safely used. It is preferably braised, fried, or broiled.

Tongue — The tongue may be boiled, or boiled and pickled. It should be firm and plump.

Kidneys — Kidneys should be neither cloudy nor spotted in appearance. They are best broiled, fried, or stewed.

USING MUTTON FAT

Mutton fat has generally been regarded as hopeless from the culinary point of view, both as regards texture and flavor. The hardness may be much modified by mixing mutton fat with some fat of softer consistency; as, for instance, by combining two parts of mutton fat with one part of lard. The objectionable flavor may be overcome, as suggested in Farmers' Bulletin 526, by rendering the fat with milk as follows:

Put into a double boiler two pounds of mixed fat (made of two parts mutton fat and one part lard) which has been ground in a meat-grinder. Add one cup of milk, and cook over hot water until all the fat is tried out. Then set where it will cool, and remove the cake of fat that forms on the top.

This fat may be made into savory fat by adding to each pound one onion, one sour apple, and one teaspoonful of ground thyme or mixed herbs. Cook at a low temperature until the onion and apple are browned. Then strain off the fat.

METHODS OF PREPARING THE STANDARD CUTS

In preparing mutton for cooking, by whatever method, always wipe it first with a damp cloth and remove any portions that have an unpleasant odor. Remove the pink outer skin and the caul, which is generally found skewered about a leg of lamb as purchased. In roasting, always use a rack in the dripping-pan. If the meat is allowed to cook on the bottom of the pan in a bath of melted fat, a poorly-flavored roast is sure to result, as mutton fat easily becomes scorched and acrid. The general principles for roasting mutton are the same as those for roasting all other meats, with the exception of pork:

Start the roast in a quick oven in order to sear (or seal) the surface so that all the juices will be retained. After fifteen minutes reduce the heat, season the roast with salt and pepper, and dredge with flour. Cook at a moderate temperature, allowing twenty minutes for each pound. It greatly improves the flavor to baste the roast with bacon or salt-pork drippings and hot water, rather than with the mutton fat that is tried out. Utilize the mutton fat after modifying it as suggested above. Basting is for the purpose of driving the hot juices toward the center of the roast. The leg is the cut most often used for roasting, because it has the smallest percentage of waste, but the fore quarter with the shoulder blade removed makes a cheap and good roast, as do also the shoulder, ribs, and loin. The breast and neck are more often used for stews, meat pies, and soups.

DIRECTIONS FOR MAKING GRAVY

Allow two tablespoonfuls of fat for every cup of gravy, skimming them from the top of the liquid in the dripping-pan after removing the roast. Pour off all additional fat and save. To two tablespoonfuls of fat add one tablespoonful of cornstarch. Cook thoroughly, and add the hot liquid. If the gravy is too pale in color to look appetizing, color it with a little caramelized sugar, made by melting a tablespoonful of granulated sugar in a steel or iron pan and stirring it over the fire until it becomes a very dark brown, then adding one tablespoonful of boiling water and stirring till smooth.

STEWING MUTTON

Strong-flavored mutton should not be roasted. Stewing will make it much milder, especially if to the water in which it is cooked is added a little acid, such as vinegar, lemon juice, or sour milk. It is very important, if the mutton is strong, to remove every bit of the outer skin, as suggested above, and any superfluous fat. The fat may be modified and made fit for use as stated. It is good practice to soak strong-flavored mutton, before cooking, in spiced vinegar or sour milk, and to serve it with a sour sauce. To stew, cover the meat with boiling water, and cook fifteen minutes for each pound, keeping the water at the point where only an occasional bubble rises to the surface. This is the point described by one housekeeper as a "simper."

If it is desired to mask the mutton flavor with that of some other food, this is very easily done by adding to the water in which the meat is cooked such vegetables as carrots, turnips, onions, or celery, or a small quantity of each, with the further addition of a bay leaf, a clove or two, or a little whole mace. The vegetables form a flavor for both meat and gravy, and may be used as a garnish.

MAKING THE MEAT GO FARTHER

We need constantly to remind ourselves that we do not need meat in as large quantities as we have thought, and that the body will be satisfied with one good meat meal a day if meat substitutes are used in addition. Borders of rice or hominy, or a dish of dumpling (mixed exactly like baking-powder biscuits but boiled in the broth of a meat stew instead of being baked) with a generous allowance of well-made gravy, will furnish the meat flavor we desire without overtaxing our pocketbooks or our digestions. A well-seasoned bread stuffing serves the same purpose, and if we are puzzled as to how to use left-over bread stuffing, it is well to remember that the far-famed "bread sauce" which cook-books recommend is nothing more than we can achieve by simply boiling left-over stuffing in milk until smooth and well-blended. The proportion is four tablespoons of stuffing to a cup of milk.

Mutton Stew (Janet McKenzie Hill)

2 to 3 pounds neck of mutton.

2 to 3 tablespoonfuls of dripping.

2 onions.

1 carrot.

A sprig of parsley with a bay leaf, cloves, and peppercorns.

6 potatoes.

1 pint of tomato pulp.

Salt.

Cut the meat into pieces two inches square, stir and brown in the hot dripping, add the onions cut in pieces, with the spices and parsley and water nearly enough to cover the meat, and let simmer about two hours. Then add the carrot, potatoes, salt, and tomato. Simmer very slowly till meat and vegetables are tender. (Tie the spices

and parsley in a bit of cheesecloth before adding, so that all may easily be taken out together before serving the stew.)

Casserole of Kidneys (From "Good Housekeeping")

Cook one small sliced onion in three tablespoons of dripping in the casserole dish, add one sliced carrot, one slice of turnip, and one stalk of celery cut in small pieces, a bunch of sweet herbs, and nine sheep's kidneys that have been cut in half and previously cooked in one cup of water for four minutes. Add one to two tablespoonfuls of lemon juice, three teaspoonfuls of Worcestershire sauce, and seasoning. Cover closely and cook two hours.

GENERAL ESSENTIALS OF MUTTON COOKERY

1. To remove all parts having an unpleasant odor, in order to provide a smooth, well-seasoned gravy.
2. To have all utensils, plates, etc., hot, so that the fat may not begin to harden before the meal has fairly begun.

REFERENCES: Farmers' Bulletin 526, *Mutton and Its Value in the Diet*, and Farmers' Bulletin 391, *Economical Use of Meat in the Home* (U. S. Dept. of Agriculture, Washington, D. C.) ; Cornell Reading Course Bulletin, *Waste of Meat in the Home*, Parts I and II (Cornell University, Ithaca, N. Y.)

STATISTICS RELATIVE TO SHEEP IN NEW YORK STATE, ARRANGED BY COUNTIES

(Taken from U. S. Census, 1910)

COUNTY	Number rams, ewes, and wethers	Number spring lambs	Total number	Total value	Number fleeces shorn	Value of wool*
Albany.....	10,540	6,530	17,070	\$91,183	9,397	\$19,127
Allegany.....	17,317	7,003	24,320	135,900	17,505	33,033
Broome.....	6,242	3,358	9,600	50,998	5,645	9,519
Cattaraugus.....	6,171	3,538	9,709	54,164	5,108	10,157
Cayuga.....	13,741	7,217	20,958	109,230	12,107	23,108
Chautauqua.....	9,084	5,210	14,294	77,174	7,740	14,153
Chemung.....	4,738	2,265	7,003	33,280	4,463	7,799
Chenango.....	3,799	2,067	5,866	34,806	3,233	5,399
Clinton.....	8,452	2,617	11,069	65,814	7,341	13,039
Columbia.....	15,525	9,704	25,229	125,899	13,459	22,045
Cortland.....	2,042	1,574	3,616	20,773	1,913	3,787
Delaware.....	5,298	4,004	9,302	52,155	4,780	8,087
Dutchess.....	8,467	6,252	14,719	85,257	7,676	13,034
Erie.....	6,557	2,945	9,502	48,146	4,927	9,674
Essex.....	14,330	5,484	19,814	89,518	13,620	24,537
Franklin.....	3,510	1,723	5,233	30,390	3,372	5,595
Fulton.....	1,290	737	2,027	8,413	1,083	1,542
Genesee.....	26,071	12,845	38,916	205,518	25,721	46,420
Greene.....	5,770	3,938	9,708	50,745	5,656	10,462
Hamilton.....	1,504	1,011	2,515	9,513	1,479	2,073
Herkimer.....	1,662	1,295	2,957	17,031	1,460	2,825
Jefferson.....	7,484	4,575	12,059	64,816	6,120	10,345
Lewis.....	3,277	1,948	5,225	25,105	2,292	3,517
Livingston.....	39,249	20,545	59,794	307,168	37,427	68,878
Madison.....	4,822	2,780	7,602	42,898	4,446	7,712
Monroe.....	18,546	12,154	30,700	176,654	17,484	32,355
Montgomery.....	2,108	1,794	3,902	24,746	1,685	3,185
Nassau.....	368	223	591	3,387	182	303
Niagara.....	18,459	9,782	28,241	135,696	16,212	30,634
Oneida.....	3,914	2,596	6,510	38,881	3,432	5,765
Onondaga.....	10,760	6,524	17,284	95,229	9,818	19,378
Ontario.....	42,334	25,168	67,502	346,521	41,352	78,407
Orange.....	2,238	1,666	3,904	23,238	1,405	2,305
Orleans.....	39,017	20,849	59,866	310,777	38,159	71,873
Oswego.....	3,916	2,093	6,009	34,083	3,394	5,626
Otsego.....	6,180	3,928	10,108	81,319	5,962	11,010
Putnam.....	695	525	1,220	10,481	611	878
Queens.....	11	4	15	75	.....	.....
Rensselaer.....	17,491	7,699	25,190	111,471	18,233	39,828
Richmond.....	15	1	16	77	14	26
Rockland.....	305	116	421	3,278	180	319
St. Lawrence.....	11,196	7,317	18,513	107,192	9,989	18,749
Saratoga.....	6,721	4,762	11,483	50,605	6,442	11,849
Schenectady.....	2,075	1,426	3,501	18,415	1,928	3,767
Schoharie.....	6,938	4,484	11,422	62,218	7,066	13,349
Schuyler.....	15,693	7,289	22,982	120,450	15,881	33,302
Seneca.....	9,989	5,325	15,314	91,595	9,149	19,066
Steuben.....	38,957	14,204	53,161	260,155	40,356	76,612
Suffolk.....	2,795	852	3,647	15,167	2,270	2,631
Sullivan.....	3,754	2,804	6,558	31,658	2,685	4,396
Tioga.....	8,293	4,800	13,093	70,144	6,953	12,177
Tompkins.....	12,021	7,623	19,644	102,605	10,931	21,022
Ulster.....	3,147	2,574	5,721	28,084	3,231	5,014
Warren.....	8,652	3,459	12,111	51,457	8,864	13,919
Washington.....	25,662	11,090	36,752	160,071	26,444	63,089
Wayne.....	15,514	9,073	24,587	120,410	13,649	26,455
Westchester.....	745	395	1,140	10,468	659	1,258
Wyoming.....	17,084	7,447	24,531	125,906	16,833	29,984
Yates.....	23,584	12,970	36,554	181,244	24,188	47,662
The State.....	606,119	324,181	930,300	\$4,839,651	573,611	\$1,082,060

* Value of wool includes value of mohair and goat hair, the number of fleeces of which was 1,598.

LIST OF SHEEP ASSOCIATIONS

NATIONAL ASSOCIATIONS

Cheviot

American Cheviot Sheep Society

F. E. Dawley, secretary-treasurer, Fayetteville, N. Y.

Cotswold

American Cotswold Registry Association

F. W. Harding, secretary-treasurer, Waukesha, Wis.

Dorset

The Continental Dorset Club

Miss Edith Chidester, secretary, Mechanicsburg, O.

Hampshire-Down

American Hampshire Sheep Association

Comfort A. Tyler, secretary, Coldwater, Mich.

Leicester

American Leicester Breeders' Association

A. J. Temple, secretary, Cameron, Ill.

Lincoln

National Lincoln Sheep Breeders' Association

Bert Smith, secretary-treasurer, Charlotte, Mich.

Merino, American

Vermont, New York, and Ohio Merino Sheep Breeders' Association

Wesley Bishop, secretary, Delaware, O.

Merino, Delaine

American and Delaine-Merino Record Association

S. M. Cleaver, secretary, Delaware, O.

Merino, Rambouillet

American Rambouillet Sheep Breeders' Association

Dwight Lincoln, secretary, Marysville, O.

Oxford-Down

American Oxford-Down Record Association

W. A. Shafor, secretary, Hamilton, O.

Shropshire

American Shropshire Registry Association

J. M. Wade, secretary-treasurer, Lafayette, Ind.

Southdown

American Southdown Breeders' Association

Frank S. Springer, secretary, Springfield, Ill.

Tunis

American Tunis Sheep Breeders' Association

Raymond H. Hays, secretary, Bainbridge, Ind.

GOATS

Angora

American Angora Goat Breeders' Association

R. C. Johnston, secretary, Kansas City, Mo.

Milch

American Milch Goat Record Association

J. C. Darst, secretary, Dayton, O.

STATE AND COUNTY ASSOCIATIONS

Delaware County Sheep Growers' Association

John Q. Barlow, secretary, Beerston, N. Y.

Essex County Sheep Breeders' Association

E. W. Stafford, secretary, Willsboro, N. Y.

Otsego County Sheep Breeders' Association

Howard Cunningham, secretary-treasurer, Cooperstown, N. Y.

CONSTITUTION AND BY-LAWS OF THE OTSEGO COUNTY SHEEP BREEDERS' ASSOCIATION

CONSTITUTION *

ARTICLE 1 — NAME

The name of this organization shall be the Otsego County Sheep Breeders' Association.

ARTICLE 2 — OBJECT

The object of this Association shall be to establish a friendly intercourse among its breeders and the exchange of ideas; to promote the breeding and improvement of purely bred sheep, especially Shropshires and Cheviots since we have the largest number of these two breeds and since it is for the best interests of the community that a large number of not more than two breeds be kept; to aid its members in buying, breeding, and selling first-class animals; to sell wool cooperatively; to spread broadcast information regarding the best kind of sheep fence; and to establish a good reputation for Otsego County as a sheep-breeding center.

ARTICLE 3 — FARM BUREAU, ETC.

This Club shall be an auxiliary of the Farm Bureau and shall work in cooperation with that Association. Each member of the Club shall be a member of the Farm Bureau in order that the stenographer of that Association may become the Assistant Secretary of the Club. Each member of the Club will then be entitled to use the Monthly Farm Bureau News of the Farm Bureau.

ARTICLE 4 — OFFICERS

The officers of this Association shall consist of a President, Vice-President, Secretary-Treasurer, and two Directors, one representing each of the two breeds. These officers will hold office for the term of one year, or until their successors shall be elected.

* Suggested form for constitutions for similar associations.

ARTICLE 5 — PRESIDENT

The duties of the President shall be to preside at all regular or special meetings of this Association and to perform such other duties as are customary for presiding officer to perform.

ARTICLE 6 — VICE-PRESIDENT

It shall be the duty of the Vice-President to preside at all meetings during the absence of the President.

ARTICLE 7 — SECRETARY-TREASURER

He shall have charge of all correspondence of the Association; also of all books and papers belonging to the Association and in connection with the President shall issue the call for all meetings. He shall also have charge of all funds belonging to the Association; shall receive all membership fees and pay all bills of the Association and render a full report at each annual meeting.

ARTICLE 8 — EXECUTIVE BOARD

The Executive Board shall consist of the officers and directors as are provided in Article 4 of this Constitution. It shall be their duty to have the general supervision of the affairs of this Association. Three members of the Executive Board shall constitute a quorum for the transaction of business.

ARTICLE 9 — AMENDMENTS

This Constitution may be amended by a majority vote at any annual meeting.

BY-LAWS

1. Any person interested in sheep husbandry may become a member of this Association upon the payment of fifty cents annually.

2. A member to be in good standing and entitled to vote must have paid into the treasury the annual dues at or before the annual meeting.

3. Members in good standing may vote upon all questions before the annual meeting.

4. The time and place for holding semiannual meetings shall be fixed by the Executive Board, and notices sent to all members thirty days in advance.

Special meetings may be held at any time at the call of the Executive Board.

GOAT'S MILK FOR INFANT FEEDING*

WHITMAN H. JORDAN, Sc. D., LL. D.,

Director, New York Agricultural Experiment Station, Geneva, New York

AND

GEORGE A. SMITH,

Dairy Expert, New York Agricultural Experiment Station, Geneva, New York

W. H. JORDAN

G. A. SMITH

The value and use of the milch goat have received considerable attention during the past few years. Very few data seem to have been available concerning this animal. In view of this fact, the Board of Control of this institution, some eight or ten years ago, authorized the purchase and importation of not over six high-grade Swiss goats, of either the Saanen or Toggenberg breed. A quarantine, established because of outbreaks of foot-and-mouth disease on the Continent and in England, prevented carrying out this plan. Some two or three years later Mr. H. S. Greims, of New York City, offered to present to the Experiment Station a flock of goats then in his possession. The offer was accepted, and Mr. Greims very generously shipped the animals to the Station, with considerable apparatus, without charge to the institution. We understand that the flock was purchased from a Mr. Riddle, of New Jersey. As the venture had not proved entirely satisfactory to Mr.

* This article is composed of excerpts from New York Agricultural Experiment Station Bulletin No. 429, February, 1917, Goat's Milk for Infant Feeding, by W. H. Jordan and G. A. Smith.

Greims, due to the loss of some of his best does and because of his difficulty in having them cared for and their records kept as he desired, he concluded to abandon the enterprise.

The flock included some very good animals, one full-blood Saanen and several full-blooded Toggenbergs, but many of the other animals were of inferior value and of no especial breeding. Some of these were promptly discarded. The better animals were kept, and an attempt was made during several years to ascertain the amount of food consumed and the quantity and composition of the milk produced.

EXPERIMENTS AT GENEVA EXPERIMENT STATION

During the years 1910-1912 inclusive, the number of animals of which complete records were kept varied from 10 to 26. The total cost of their food, at prices then ruling, was \$441.95. The average cost per month per goat varied from \$0.481 to \$0.992. The average cost of food per goat per year was \$11.05, making the daily cost \$0.03.

The yearly production of milk, including some animals in the first period of lactation, varied from 301.7 pounds to 1,845.2 pounds. The average yearly yield for ten animals of which records were kept during three years, including twenty-eight lactation periods, was 800.4 pounds.

The food cost of the milk per goat for the three years during which the record was kept was 3.4 cents. The lowest cost was with the Saanen goat, No. 11, for the year 1911, which was estimated to be 1.27 cents per quart. The other items of cost, such as care and overhead charges, it is not possible to give with any accuracy. The average food cost for a quart of milk from the Station herd of twenty-five Jerseys during the three years has been found to be \$0.0092 per quart.

The range of composition of the mixed milk of the whole flock as determined during May and June of the year 1912 was as follows: Solids, 11.4 per cent to 11.9 per cent; solids not fat, 7.72 per cent to 8.61 per cent; fat, 3.5 per cent to 3.8 per cent.

The composition of milk from individual goats was found to vary in total solids from 9.22 per cent to 18.55 per cent; in protein, from 2.24 per cent to 4.96 per cent; in casein, from 1.56 per cent to 4.6

per cent; in fat, from 1.08 per cent to 8.4 per cent; and in ash, from 0.43 per cent to 0.8 per cent.

A Chemical Study of Goat's Milk

In 1915, Mr. A. W. Bosworth, at that time associate chemist at this institution, and L. L. Van Slyke, chemist, made a somewhat elaborate chemical study of goat's milk in comparison with cow's milk and human milk. The results of this investigation may be seen in Technical Bulletin No. 46, issued by the Station in December, 1915, entitled "The Casein and Salts in Goat's Milk." It is not desirable to reproduce the text of that bulletin in this connection, but a few of the most important conclusions are here reviewed:

1. So far as could be judged from its combinations with bases, the casein of goat's milk does not differ essentially from that prepared from cow's milk.

2. Both goat's milk and cow's milk contain much larger percentages of solids than is the case with human milk.

3. Goat's milk contains practically the same amount of calcium phosphates as cow's milk, excepting that in goat's milk a certain proportion is in the tri-calcium form, which is not true of cow's milk. In this respect both differ from human milk, which appears to contain no calcium phosphates.

4. Cow's milk and goat's milk contain a much larger proportion of the magnesium phosphates than does human milk.

5. The proportion of mono-potassium phosphate was found to be practically the same in goat's milk and human milk. Cow's milk was found to contain di-potassium phosphate, of which goat's milk and human milk were found to contain none.

6. The proportion of potassium citrate was found to be much larger in goat's milk than in either cow's milk or human milk; on the other hand, cow's milk was found to contain considerable sodium citrate, of which goat's milk contains none and human milk only a small proportion.

7. Goat's milk was found to contain both sodium and potassium chlorides, of which cow's milk and human milk contained none.

8. Calcium chloride was found in about equal proportion in cow's milk and goat's milk, being about twice as large in both cases as found in human milk.

These differences in the composition of the three milks studied do not at present furnish an explanation of the reason why goat's milk appears to have been better adapted in many instances to infant feeding than cow's milk.

Goat's Milk As Food for Infants and Very Young Children

Experience seems to have indicated that goat's milk has a peculiar adaptability to feeding infants and young children in cases where they must be given artificial food and neither modified cow's milk nor the proprietary infant foods are fed with success. Because of this fact, it was determined to make a somewhat exhaustive study of the applicability of goat's milk to infant feeding.

An effort was made to get data in two ways: (1) by a somewhat extensive series of observations carried on in cooperation with Drs. DeWitt H. Sherman and Harry R. Lohnes, of Buffalo; and (2) by supplying goat's milk for use with infants in those cases where other foods had been found inapplicable. The physicians mentioned carried on their study in the Saint Mary's Infant Asylum and Maternity Hospital, in Buffalo, to which institution practically sixteen quarts of goat's milk was shipped daily in an iced container. This milk was drawn under the best of conditions and was found to be in good condition at the time of arriving at the hospital.

As a result of this extensive study it became evident that the curds of goat's milk when returned from the stomach were smaller and more flocculent than those of cow's milk. From the determination of the combined hydrochloric acid in the returned food, the authors conclude that the cow's milk had a greater stimulating effect on the stomach than goat's milk. The absorption of the food and gain in weight in comparing the two milks were indefinite for several reasons. The babies tolerated equally well similar amounts of goat's milk and cow's milk when used with the same diluents. The younger the child, the more the evidence pointed toward a greater gain on goat's milk.

Goat's milk was supplied to eighteen cases of children that were not thriving on any other food that had been tried. In seventeen cases a satisfactory state of nutrition was established through the use of goat's milk, the beneficial results in some instances being very marked. With certain of these children their situation was regarded as serious, and their restoration to a satisfactory nutritional condition was good evidence that goat's milk is often a very desirable resort for infant feeding.

[As the Station herd of goats has been sold, no milk is now available for any purpose.]

BREEDS OF SHEEP

FINE WOOLS

American Merino
Delaine-Merino
Rambouillet Merino

MEDIUM WOOLS

Southdown
Shropshire
Hampshire
Suffolk Down
Oxford Down
Cheviot
Dorset

LONG WOOLS

Cotswold
Lincoln
Leicester

ADDITIONAL BREEDS

Tunis
Black Faced Highland
Karakul

THE MERINO

S. M. CLEAVER

Secretary-Treasurer, American and Delaine-Merino Record Association, Delaware, O.



From our noted historians we must accept the fact that the original home of our Merino sheep was Asia. Following the line of civilization, they were successfully introduced into Greece, then to Italy and along the shores of the Mediterranean to Spain, receiving in each country for many centuries great care and improvement, and culminating finally in the establishment of the breed having the finest wool of the world, reaching Spain

before the Christian era. Here they made great improvements and were the objects of the greatest care.

The excellency of the Merinos consists in the fineness and felting property of their wool; the ease with which they adapt themselves to every change of climate, and thrive and retain, with common care, all their fineness of wool, under a burning, tropical sun or in the frozen regions of the North; an appetite that renders them apparently satisfied with the coarsest food, a quietness and patience into whatever pasture they are turned; and a gentleness not excelled in any other breed.

The Spaniards long preserved the monopoly of this race of sheep with jealous care. To allow their departure from Spain without special permission of the sovereign was punishable with death or heavy penalties, according to the rank of the offender. Other countries, however, were at length able to carry off the invaluable golden fleece of Spain, and the Merino race is now spread over the greater part of Europe, America, and the boundless plains of Australia and New Zealand, in all of which places it has been found to retain with wonderful constancy the characters that were

imprinted on it in its native pastures, in many cases surpassing in useful properties those of the parent stock.

It is estimated that in the sixteenth century the sheep of Spain numbered 7,000,000; under Philip III the number fell to 2,500,000. At the beginning of the eighteenth century it was placed at 4,000,000. At that time began the decline both in the condition and the sacredness of the flocks in Spain and her monopoly in fine wool. War desolated her soil and the once fine flocks fell away under Napoleon's entrance into Spain; his soldiers and those of Wellington slaughtered and ate thousands of sheep; the French marshals and generals drove other thousands out and transported them to their estates; thousands were shipped to England, and still other thousands to the United States. The once famous *cábanas* were thus extinguished forever.

Not as immediately, but quite as effectually, other agencies had been at work to pull down her monopoly in fine wools. At various times, from 1723 to the close of the century, several princes and persons of Europe had obtained permission to take from the kingdom small flocks for the improvement of the native sheep of their respective states. Great care and skillful breeding carried the improvement forward until at last Saxony appeared in the markets of Europe with a wool superior to the far-famed wool of Spain and broke down her monopoly. The Saxon Merino had eclipsed its progenitor, the Merino of Spain.

When too late, the Spanish government saw the error it had committed or allowed the kings to commit, in permitting, through an excess of kindly courtesy, the dissemination of the fine-wooled Merino over Europe to states friendly and unfriendly. Though the law against the exportation of these sheep was very severe it was frequently violated, and numbers of the finest animals were taken from the flocks in Spain, driven through Portugal, and shipped from Portuguese ports to foreign countries. Adventurers of every degree engaged in this business, the most noted one being George III, King of Great Britain, who sent his secret agents into Spain, purchased many animals, smuggled them out of the kingdom, drove them across Portugal, and shipped them from Lisbon to England. When the Spanish Government realized the facts that the German states were rapidly improving their fine wool,

that France was doing the same, and that England was also bent on a similar project, it put forth efforts to stem the disaster that was menacing the interests of the country, by repeating the stringent orders against the further exportations of fine Merino sheep. It was a feeble effort, but it was all that feeble Spain could do. By royal decree, June 24, 1798, it was ordered that, owing to the high price of wool in Spain, under no pretext should it be permitted to export sheep from the kingdom.

FIG. 27.—MERINO RAM, GOLD COIN, JR.—SHEARED OVER 40 POUNDS OF WOOL IN 1917

However, the wars of Napoleon with Spain opened up that country and rendered it possible to obtain some of their jealously guarded sheep, which had for centuries been held for their exclusive benefit. The confused state of society having made it possible to secure numerous shipments of the finest Merinos into the United States, during the years of 1809 and 1810 there were 18,953 Merinos received at our eastern ports. These were distributed over the eastern and middle states and very rapidly improved the native sheep of this country.

A number of breeders retained the Spanish Merino in its purity, and after a period of fifty years of careful breeding had increased the weight of fleece more than three times. This was brought about by skillfully selecting the breeding stock and choosing the individuals showing the greatest density of fleece — the result of small corrugations in the skin — and increasing them to large wrinkles and great folds, all thickly coated with wool. The skillful breeders that brought about such results were found in the New England states, extending west into New York and Ohio, including West Virginia and Michigan. The breeders of the United States so rapidly increased the number of fibers to the square inch that they surpassed all countries in the production of heavy fleeces with great quality, as shown by the honors won at the world's exposition

FIG. 28.— TWO SONS OF GOLD COIN AND THEIR DAM. BOTH ARE CHAMPION RAMS

more than sixty years ago for the highest class of wool shown at Hamburg, Germany.

Many of our breeders develop the wool-producing power beyond the capacity of the animal to support it, simply by neglecting constitutional vigor to support the fleece produced, under that single idea — fleece production — until many of the flocks become almost worthless from lack of constitution. Of latter years, breeders have been more equally dividing the fleece-producing power with that of the flesh-producing power, making a more practical combination. Our best rams range from 150 to 180 pounds, shearing from 30 to 35 pounds of wool, a few choice ones going a few pounds above, while many of our high-class ewes shear

from 20 to 25 pounds and above, with live weight from 100 to 125 pounds.

High-class Australian Merinos have improved from Merinos exported from the states until they stand on an equality in fleece production with any wool-producing country. Our most important export trade at this time is to South Africa and Uruguay, where we are furnishing many high-class Merinos for the improvement of the native sheep of those countries. It is my opinion that in the next twenty years breeding will bring about a more uniform type of Merinos, along the line of a more practical combination of wool and mutton production.

The rules for classification of sheep as adopted by the American and Delaine-Merino Association are given below.

When the applicant makes application for admission he must state (after giving the breeding) what type his sheep represents, "A", "B", or "C". Type A is an extremely dense fleece folded sheep; type B is a larger sheep with folded neck, tail, hip, and flanks; type C growing a Delaine staple without folds.

INSTRUCTIONS FOR CLASSIFYING SHEEP

The breeder is requested to classify carefully, in accordance with the above three types — A, B, and C. Remember that lambs having wrinkles and bred from B or C type, as a rule, will show much less wrinkle the second year. By carefully classifying according to type, the breeder will be greatly benefited from the examination of the type of the ancestors of the ram he is purchasing, as the certificate of transfer of each individual sheep will show the name, number, and type of six ancestors. From this, he may largely determine what to expect.

The breeder is supposed to understand fully the line or type of his own flock, which, with the additional help of a certificate of transfer of a ram he may purchase, bred by one who has accurately kept the type as well as the breeding of his flock, would be of much value in determining the results of his selection in a sire.

The breeder should use great care and judgment properly to class his sheep according to their type, first, for the reason that his classifying will be recorded in all publications. This places his judgment on record in every volume published; therefore the record will

stand against him when he places a sheep in the Delaine class that does not grow a Delaine staple in twelve months. In order to be eligible to the Delaine class, the sheep must be plain, growing a Delaine staple. A sheep with a folded neck shall not be eligible to the Delaine class, even though he may be growing a Delaine staple. Class B is his place.

Type B sheep should have a better form than we usually find in a typical fleeced type A sheep.

Type A sheep is understood to be a dense-fleeced, heavy-shearing sheep, with more or less body wrinkles.

The show ring sheep should be typical of the type they represent, in order to avoid the confusion as to where they belong.

THE RAMBOUILLET *

CHARLES S. PLUMB, Columbus, Ohio.

Professor of Animal Husbandry, College of Agriculture of the Ohio State University



The native home of the Rambouillet is in France, in the northern part, not far from Paris. The country is gently rolling, the soil is generally of a calcareous nature, and the climate is quite temperate, being warm in summer and not severe in winter.

The ancestry of the Rambouillet is Spanish, this being a member of the great Merino family. As in early days the people of Spain produced more wool than

their factories could consume; the surplus was exported, France buying heavily. The French government anticipated an increase of factories in Spain and consequent restriction on exports of wool from that country. This led the French to try to improve their flocks and produce enough fine wool at home to meet domestic demands. In 1783 Louis XVI of France bought a large estate at the village of Rambouillet, some forty miles west of Paris, and here he established a farm. In 1786 M. Gilbert was sent to Spain and he selected a flock of Spanish Merinos representing several different families, landing 366 at Rambouillet, 318 being ewes. In 1799 Gilbert again went to Spain and after much difficulty secured another collection, of which 237 reached Rambouillet in May, 1801. According to Gilbert, who died in Spain while doing the work of collection, the second lot was not the equal of the first.

The improvement of the Rambouillet in the hands of the French government dates back over a century, resulting in a smooth-bodied sheep of large size. Much of this development of over a

* Extracts from article on the Rambouillet in *Types and Breeds of Farm Animals* by Professor Charles S. Plumb, Ohio State University.

hundred years has undoubtedly been accomplished by selection. The Rambouillet Merino was also developed by private parties in France and Germany. Baron F. Von Homeyer of Ranzin, Pomerania, became the greatest German improver, increasing the size, and weight and quality of fleece. Mr. W. G. Markham of New York State when on a visit to wool-producing countries in 1880, inspected the Von Homeyer flock and looked on it with much favor. In 1882 he received a gift of a ram and two ewes from Von Homeyer, which were the first of this German breeding to be brought to America. In 1886 Markham received seven rams from the same source, two of which were shipped to Michigan, where they produced material improvement in the flocks where used. In 1891 some Michigan breeders imported seven rams and sixteen ewes from the Von Homeyer flock, and these were distributed among the Rambouillet men of Michigan. In 1893 Mr. Markham supervised an exhibit of Von Homeyer sheep at the World's Columbian Exposition at Chicago which attracted widespread attention from their great size and superior merit. This family of Merinos is now extensively bred in Germany.

INTRODUCTION TO UNITED STATES

The introduction of the Rambouillet to the United States first occurred in 1840, under the name of French Merino, by which title it was generally known until about 1889. The first importation appears to have been made by D. C. Collins of Hartford, Connecticut, consisting of two rams and twenty ewes from the government flock of France. The head ram, named Grandee, sheared 14 pounds and was regarded as a very fine specimen. In 1848, John D. Patterson of Westfield, New York, made an importation including many superior sheep, his ewes weighing from 120 to 150 pounds and some of his rams up to 300 pounds. In 1851, F. M. Rotch of New York is said to have made an importation with John A. Taintor of Connecticut. Other importations were made during the same year by breeders in Vermont and Ohio. In 1851, Mr. R. C. Moulton of Ohio, now over eighty years old, established his flock of French Merinos, which he has maintained ever since, this probably being the oldest flock under one management in the country. What are now known as Franco-Merinos

trace back into early Michigan flocks of years ago. These early French Merinos were not the success anticipated, not being hardy nor suited to American conditions, and the interest declined along in the sixties, to be revived about thirty years later. Many large importations have been made during the past ten years and notably about 1900.

FIG. 29.—RAMBOUILLET EWE

CHARACTERISTICS

This variety or family of Merino does not differ so essentially in appearance from the Delaine, except in size and breeding. The head is large, the nose covered with white, silky hair, and the ears are inclined to be large and covered with fine white hair or short fine wool. The rams usually have large, spirally turned horns, but there are also hornless males and the females are hornless. The wool is fairly compact and long, averaging about three inches, and covers the entire body, extending over the face below the eyes and down the legs to the toes in good specimens. The exterior appearance is a sheep of good size, covered with a fine, rather white fleece, and freer from oil or dark coloring than is the Delaine, while folds occur on the neck and breast, but rarely on the body or hind quarters. One is impressed at times with a tendency to coarseness of bone and length of leg.

SIZE

The size of the Rambouillet averages larger than any of the other Merinos; in fact years ago they were nicknamed "Elephant Merinos." The rams will average about 185 pounds at maturity and the ewes 150 to 160. Some rams are said to have weighed over 300 pounds, and cases are known of ewes weighing about 250 pounds.

MUTTON

The Rambouillet as a mutton producer ranks very well, though inferior to the mutton breeds. It will mature fairly rapidly and will produce a class of mutton that will sell well, although not of the highest quality. This is the only class of Merinos offered a place for exhibition at the International Live Stock Exposition, a testimonial to the mutton value of the wethers. In the Iowa experiments on fattening wether lambs, in the one trial reported, the Rambouillet made an average daily gain of .37 pound, requiring 1029 pounds dry matter for 100 pounds gain. In the carcass test the Rambouillet dressed out the poorest of ten breeds, 49.57 per cent, compared with 55.26 for the Southdown, and was priced at \$5.00 per hundred live weight, compared with \$5.75 for the Southdown.

WOOL

The Rambouillet as a wool producer ranks well. In 1838, on the farm at Rambouillet, 40 rams yielded an average fleece of 10 pounds 4 ounces, and 201 ewes and 85 lambs an average of 7 pounds. The years 1847, 1869, and 1877 saw a gradual improvement in weight and quality of fleece, the latter year 16 adult rams averaging 16 pounds 9.3 ounces weight of fleece, and 521 ewes of various ages 10 pounds 3.1 ounces. At the present time it is doubtful if the average ram will shear over 15 pounds, but this, of course, does not apply to flocks as carefully bred as that at Rambouillet. The fleece of this breed is not quite so fine as that of the other Merinos and also shows somewhat less of oil and crimp.

CROSS-BREDS

Cross-bred or grade Rambouillet sheep are best known on the western range, where for some years large numbers of pure-bred

rams have been shipped from Ohio and Michigan for use on native stock. This gives a larger, better mutton type, with a strong constitution, and at the same time increases the fleece value. Not only this, but the smooth-bodied grade is more in favor with the shearer on the range than the smaller, more wrinkled sort. Vermont breeders in the past have used Rambouillet rams on American ewes to produce large, vigorous rams suited to the southwestern trade.

BREEDING QUALITIES

The breeding qualities of the Rambouillet rank well. For twelve years preceding 1881, Bernardin, then in charge of the government flock in France, reports that 4005 ewes were reserved for breeders, of which 83.1 per cent were productive, the 83.1 ewes dropping 92 lambs, including twins. In the author's experience with the Rambouillet, covering ten years, the ewes were prolific breeders, frequently dropping twins, and were unusually good mothers, having large udders and producing much milk. One objection of the ewes was too large a teat. The udders averaged larger than in any other breed of sheep with which the author was familiar. Owing to their natural vigor the ewes breed to a ripe old age.

HARDINESS

The hardy quality of the Rambouillet is worthy of note. Formerly, when the French Merino was introduced, many found it unsuited to American conditions. The last quarter of a century, however, has shown that the Rambouillet has excellent wearing qualities, certainly surpassing the mutton breeds. In winter the writer has found them comparatively free from catarrh, while in summer on the same pasture with sheep badly suffering with stomach worm, the Rambouillet seemed comparatively free from the serious effects of the parasite.

The early maturity of the Rambouillet from the standpoint of Merino development is distinctly in its favor. The lambs come on rapidly and compare favorably with the mutton breeds.

PRICES PAID

Prices of interest for Rambouillet sheep date back for over a half a century. In 1853 John D. Patterson of New York purchased a ram in France for \$600, from the flock of M. Cugnot. He also paid Victor Gilbert \$400 each for two rams. In the late fifties when Mr. Patterson sold his sheep to California buyers, it is reported that he received \$1500 each for three rams, \$1000 for one, \$800 apiece for two, and prices ranging from \$300 to \$700 for eighteen others. Fourteen ewes also brought \$4500, or an average of \$321 per head. These probably represent the highest prices brought by individuals of this breed, either in America or Europe. A. L. Bingham of Vermont, between 1847 and 1853, paid John A. Taintor \$37,500 for 161 French Merinos, or about \$232 a head. The more modern Rambouillet has never brought such high prices, although some rams in recent years have sold for as much as \$300 each.

THE SOUTHDOWN

FRANK S. SPRINGER

Secretary, American Southdown Breeders' Association, Springfield, Ill.



The Southdown is probably the oldest breed of sheep in existence. There is a distinct record of this breed through agricultural writings for more than two hundred years.

The breed originated in the low range of hills in southeastern England, known as the Southdowns, which extend through the counties of Kent, Sussex, Hampshire, and Dorsetshire. The development of the Southdown has been through selection.

While this breed has undoubtedly been used for the improvement of some of the other Down breeds, the introduction of new blood in Southdowns has been unsuccessful.

The great improvers of the breed were John Ellman, of Glynde, and Jonas Webb, of Babraham. During more than one hundred years of careful selection and breeding, the horns have been eliminated and there has been a wonderful improvement in the carcass, especially in the forequarters, neck, and rump.

WIDELY KNOWN

Southdowns are found in practically every country and their distribution is almost universal. They are found in many parts of England and exportations have been made to every civilized country.

Southdowns were first imported into the United States in large numbers in 1803, and importations from England have been made continuously since that date.

The breed can be found in all sections of the United States, but is seen in larger numbers in the eastern and southern states. In the regions of Tennessee, Kentucky, and Virginia, where spring lambs are raised in large numbers, no breed is so popular as the Southdown. There are few other sections where one breed has been adopted as the standard over such a wide territory.

PECULIARLY A MUTTON SHEEP

The Southdown is the mutton sheep par excellence. For quality and beauty it cannot be surpassed, hence it is called the "gentlemen's sheep." The membership list of the American Southdown Breeders' Association contains the names of a large number of very wealthy gentlemen who admire this breed and whose flocks are of more than ordinary excellence. They are a favorite breed for the owners of country estates, both on account of their beauty and their excellent mutton quality.

FIG. 30.—YEARLING SOUTHDOWN RAM — FIRST AND CHAMPION AT TORONTO, NEW YORK STATE FAIR, AND INTERNATIONAL LIVE STOCK EXPOSITION, 1916

Other breeds have been tried here, but have not been found equal to the Southdown. The lambs weigh from 60 to 90 pounds when from three to four months old, and are ready for the market in May, June, and July. They often gain from 1 to 1 $\frac{1}{4}$ pounds each per day for short periods during the growing season.

CHARACTERISTICS

Southdown sheep may claim public favor by reason of several points in which their superiority can be shown. It is a well-estab-

lished principle that the best results are obtained from animals that are grown to early maturity, one of the predominant characteristics of the Southdown.

They also produce a superior quality of both wool and mutton, which command a higher price per pound than that of other breeds. The wool of the Southdown is next in fineness to the Merino. A ewe's fleece should weigh from 6 to 8 pounds and a ram's from 10 to 12 pounds.

Through their early habits of having to travel long journeys in search of food on the rather bare hills of Sussex, they developed a high degree of endurance, with a strong constitution and plenty of muscle. On account of their thick, even coat of wool, they will stand exposure to storm, let it be rain or snow, better than most other breeds. In fact, they are no hot-house plants. They were brought up to endure hardships, and today many of the flocks in England are exposed the year round to all the inclemencies of the weather, winter and summer, without shade or shelter.

They are prolific breeders, maturing earlier, perhaps, than any other breed. They will make a pound of flesh with as little, if not less, food than any other, and more of it on the most valuable parts of the carcass, which is where the profit comes in.

EARLY MATURITY

Let us consider that very valuable characteristic — early maturity. It is generally admitted that the sheep giving the most profit is the one that goes to the butcher under one year old. All breeders have claims for their favorite breed, but none will dispute the quality of the Southdown. Some have said he is "rather small." Nevertheless, facts and figures are stubborn things, and the best way to arrive at correct conclusions is through comparisons. In this case I will take for comparison two other breeds — a long and a short wool. First, the Leicester, because the breed was about the first to attract much attention by its being improved by Bakewell and commanding very high figures in that early day. Second, the Shropshire, being a nearer relative of the Southdown and a sheep that of late years has perhaps gained more popularity in America than any other breed. For this comparison, I have taken from the figures in the official catalogue of the Smithfield show the twelve heaviest

lambs of each of the three breeds, and find the average weights as follows:

Year of Show	Shropshires Pounds	Leicesters Pounds	Southdowns Pounds
1885.....	145	169	175
1887.....	142	160	166
1890.....	162	145	167

For the three years Shropshires averaged 149 pounds, Leicesters 158, and Southdowns 169. This shows that the Southdown has the advantage in actual weight of 20 pounds per head over the Shropshire, notwithstanding the former has been dubbed as "rather small."

The Southdown, while the smallest of the mutton breeds, is remarkably compact, and on account of its deceptive weight is called the "big little sheep." Rams in breeding condition should weigh 170 to 190 pounds and ewes from 120 to 130 pounds.

VALUABLE FOR CROSSING

The fact that Southdowns possess all the most valuable points in a mutton sheep, coupled with unquestioned purity of breeding for centuries past, makes them the most valuable for crossing on common sheep to improve the mutton quality. They have played an important part in improving all the other Down breeds, the valuable qualities of which depend largely upon how much of Southdown blood courses through their veins.

PRIZEWINNERS

When placed in competition with other breeds on either side of the Atlantic, Southdown sheep have more than held their own. In this country the superior quality and value of Southdown mutton as compared with that of other breeds is not so well understood as it is in England, where the different mutton breeds have been so much longer known.

The records of that country establish beyond question the correctness of the claim for this breed of sheep. As authority the prize list of the Smithfield Club for 1891, in which there is published a

summary of champion prizes awarded and extending over a period of sixty years, is quoted.

At that show—the greatest fat stock show in existence, where all the breeds are brought out in the very pink of condition — from the year 1832 to 1861 there was offered yearly a gold medal for the best pen of wethers in the short-wooled classes; from 1861 to 1873 a silver cup was substituted for the medal, making a period of forty-two consecutive years in which a prize was offered for the best pen of wethers in the short-wooled classes. The result was that

FIG. 31.—CHAMPION SOUTHDOWN EWE AT THE LEADING FAIRS OF 1914

Southdowns won it forty-one times. (In 1847 it was won by Hampshires).

At the same show in the year 1869, there was added another prize. This was a champion prize of the value of £50 for the best pen of sheep in the show of any age, breed, or sex. This was continued, with the exception of year 1874, up to 1889 — a period of twenty years. The result was that Southdowns won eleven times,

Oxfords three times, Lincolns twice, Hampshires twice, and Shropshires twice, Southdowns winning more of these champion prizes than all the other breeds combined. And this was done where the quality and value of the different breeds is well understood.

In the carcass contest at the International Live Stock Exposition, since its beginning in 1900, pure-bred, grade, or cross-bred Southdowns have won sixty-three out of eighty-four possible prizes. This year they won all seven such prizes. Five out of thirteen times has the Grand Champion wether of this show been of Southdown breeding.

STANDARD OF EXCELLENCE

POINTS

<i>Head.</i> —Medium in size and hornless, fine, carried well up, the forehead or face well covered with wool, especially between the ears and on the cheeks and in the ewe slightly dished.....	5
<i>Lips and Under Jaw.</i> —Fine and thin.....	1
<i>Ears.</i> —Rather small, tolerably wide apart, covered with fine hair, and carried with a lively back and forth movement.....	2
<i>Eyes.</i> —Full and bright.....	3
<i>Face.</i> —A uniform tint of brown, or gray, or mouse color.....	3
<i>Neck.</i> —Short, fine at the head, but nicely tapering, and broad and straight on top at shoulders.....	4
<i>Shoulders.</i> —Broad and full, smoothly joining the neck with the back..	5
<i>Breast.</i> —Wide, deep and projecting well forward, the forelegs standing wide apart	5
<i>Back and Loin.</i> —Broad and straight from shoulders to rump.....	7
<i>Ribs.</i> —Well arched, extending far backward, the last projecting more than the others.....	6
<i>Rump.</i> —Broad, square and full, with tail well set up.....	6
<i>Hips.</i> —Wide, with little space between them and last ribs.....	6
<i>Thighs.</i> —Full and well let down in twist, the legs standing well apart.	6
<i>Limbs.</i> —Short and fine in bone, and in color to agree with the face..	3
<i>Forelegs.</i> —Well wooled and carrying mutton to the knees, but free from meat below.....	2
<i>Hind Legs.</i> —Well filled with mutton and wooled to the hocks, neat and clean below.....	2
<i>Belly.</i> —Straight and covered with wool, the flank extending so as to form a line parallel with the back or top line.....	5
<i>Fleece.</i> —Compact, the whole body well covered with moderately long and close wool white in color, carrying some yolk.....	12
<i>Form throughout.</i> —Smooth and symmetrical, with no coarseness in any part	9
<i>General Appearance.</i> —Spirited and attractive, with a determined look, a proud and firm step, indicating constitutional vigor and thorough breeding	8

THE SHROPSHIRE

J. C. DUNCAN, Lewiston, N. Y.

Superintendent, Ramsey Farm



The Shropshire sheep is a descendant from a breed known as the Morfe Common breed. This is universally acknowledged as the original stock from which the present breed of Shropshires has descended, and which has been known to exist in Shropshire and Staffordshire, England, for upwards of a century.

INTRODUCTION TO AMERICA

Shropshires were first brought into prominence at the Royal Show held in Gloucester, England, in the year 1853, when their general superiority became recognized. At the show of the Royal Agricultural Society in 1859, the breed was accorded a regular classification as a distinct breed.

Whether or not, as some assert, Southdowns or other rams have been introduced, it has been by the strongly inherited characteristics of the native breed of the district that all the best flocks have been built up, and not by the introduction of alien blood. The power of acclimation, which is possessed by this breed in a marked degree, probably accounts for the enormous strides it has made in becoming the most popular farmers' sheep of the present day.

Shropshires may be seen flourishing not only on their native soil, but in most continental countries. Their popularity in Canada and the United States makes them the favorite of both the breeder and the farmer. In fact, it is the opinion of the writer that there are a number of flocks now in the United States that are the equal of any in Great Britain, although probably not so large in numbers.

VALUABLE CHARACTERISTICS

No breed is more prolific than the Shropshire, and with ordinary management at least 150 per cent increase may be looked for in lambs annually. Frequently a triplet will take a leading position at some of our large expositions. The ewes are splendid mothers and capital nurses. Under ordinary care they have enormous milking capacity, single lambs frequently making a gain of three-quarters to one pound per day up to the age of three months. They have strong constitutions, adapting themselves to any climate and thriving on any kind of ordinary soil.

FIG. 32.—SHROPSHIRE SHEARLING RAM

The average wool clip of a fair Shropshire flock should average from 8 to 10 pounds, young rams running up as high as 18 pounds. These weights have been exceeded in the flock of the writer on several occasions. The wool is of the best quality of any of the mutton breeds, and usually commands the highest price of any wool from the Down breeds.

Shropshires are alike the favorite of the grower and the butcher. They produce a deep, square sheep, are naturally thrifty, have powerful constitutions, and combine quality and quantity in their carcasses when dressed. The size and quality of their fleeces have no equal. As the fleeces are dense and fine, they give a high percentage of clean, scoured wool, which commands a comparatively high price.

If the Shropshire ram used as the sire has been a vigorous, strong-constituted animal, as he should be, the lambs are hardy and fatten easily at an early age.

The most important question for the men interested in the sheep industry of the Empire State today is how to obtain the largest monetary return from their flocks. The practical experience of the writer, in all its bearings, points in favor of the Shropshire to a dual production of wool and mutton, with a carcass readily convertible into choice mutton and a dense fleece of slight shrinkage, which will ever leave a balance on the right side of the ledger for the producer.

VALUE FOR GRADING UP

To improve the native sheep of our state, the Shropshire ram, if of the right kind, has no peer. The breeder should at the outset start on a definite and well-understood plan, and should not embark in the business of indiscriminate and indefinite crossing. Briefly, the advantages of cross-breeding are as follows: vigor, early maturity, and immunity from disease.* Ample evidence from all parts of the globe proves the natural hardihood of cross-breeds — and especially the first cross — also their vigorous digestion and their freedom from disease, as compared with pure-bred flocks under similar conditions.

Sheepmen of wide experience testify to the rapid manner in which the Shropshire-Merino cross fatten and to the fact that even on poor land they thrive well, being less dainty than the pure-breds, which makes this cross the ideal sheep for the average farmer.

Grade Shropshire rams should never be used for crossing; as experience has proved that it is only in very exceptional cases that cross-bred sires can transmit their own good qualities to their offspring, while their bad points are only too pronounced. The fact that the good or bad features of any cross are so deeply marked in

*See article on page 78, "Pure-Breds vs. Grades."

the offspring explains the necessity of obtaining well-bred rams, all of the same general conformation and of a similar class of even wool. It is only thus that the breeder can reasonably expect a uniform carcass of mutton and a clip of wool of the same staple. Carelessness in this direction generally produces disastrous results; for if no two fleeces in the clip are of a similar character or staple it is always more difficult to sell.

VALUE OF REGISTRY ASSOCIATION

In selecting sires it must always be remembered that antiquity of breeding can easily be overestimated, and that what is of more importance is excellence of breeding.

The American Shropshire Registry Association was organized in 1884 at LaFayette, Indiana, and has been of great benefit to the sheep-breeding industry of this country. It has recorded nearly 500,000 pure-bred Shropshires, and gives away annually in special cash prizes between \$2,000 and \$3,000. The main office is still located at LaFayette, Indiana, where any person interested in Shropshires may obtain valuable information regarding them by addressing the secretary.

POINTS OF EXCELLENCE

The following points of excellence are required in Shropshire sheep eligible to registry in "The American Shropshire Sheep Record":

Type and General Appearance

An alert, attractive, and stylish appearance, showing at a glance the true characteristics of the Shropshire. 30 points.

Form and Constitution

Head.—To impress at once the Shropshire characteristics.

Head of Rams.—To be masculine as indicated by a broad nostril, short, broad between ears and eyes.

Neck.—Short and muscular fitting into shoulders in graceful outlines.

Heads of Ewes.—To be feminine in appearance, medium in length, but not delicate.

Neck.—Not so strong as in the ram.

In all cases head and face nicely covered with wool; ears, short and erect; eyes, bright; color of face, brown to a clear dark (not sooty black).

Body.—Well proportioned with shoulders so placed as to fit in evenly to a deep, wide brisket. A full heart-girth; broad, level back; ribs well sprung with straight underline; loins thick-fleshed; fore and hind flank deep; a low coupled twist, and full leg of mutton.

Legs.— Brown to clear dark color (not sooty black), well set apart, short and straight with strong upright pasterns.

Size.— When fully matured and in proper breeding condition, Rams should weigh not less than 175 to 250 pounds and ewes not less than 140 to 180 pounds. 35 points.

Fleshing

While the body should be well formed with the full outline pleasing to the eye, yet it is the quality and quantity of flesh, not fat, which gives value to the carcass. Therefore the parts furnishing the high-priced cuts should be fully developed.

The back, loins, and legs should be so fleshed as to show a large percentage of flesh compared with the other parts of the body; at the same time symmetry must prevail throughout.

Strong bone in legs conformable with size of body usually goes with a large proportion of lean meat to fat in the finished carcass. 25 points.

Fleece and Skin

Fleece of good length, elastic to the touch, medium fine and slightly crimped, free from black fibre and hairness. Ram's scrotum to be well covered with wool.

Rams should shear 8 to 15 pounds of wool and ewes 7 to 11.

Skin to be a bright cherry or clear color and comparatively free from dark spots. 10 points.

Objections

Long narrow head with long ears and neck; long legs; black wool on head to any noticeable extent; failure of wool to meet closely at the junction of face-wool and on cheeks; white spots on face and legs; crooked spine; light flanks, with long, weak pasterns; spotted skin; narrow chest showing lack of constitution.

THE HAMPSHIRE

COMFORT A. TYLER

Secretary, American Hampshire Sheep Association, Coldwater, Mich.

INTRODUCTION

The avocation of sheep husbandry is as old as time itself. All history, both sacred and profane, abounds in sheep lore. It was more than nineteen hundred years ago that the gentle Chaldean shepherds saw the Star of Bethlehem that heralded the first glad tidings of a Saviour's birth, and in after years the Divine Man of Galilee took the sheep as the type of His people, the lamb as the child He had loved. Going back eleven hundred years we find David, the sweet singer of Israel, a keeper of his father's sheep, of whom this testimonial was given: "He is cunning in playing, a mighty valiant man and a man of war; prudent in matters and a comely person; and the Lord is with him"—characteristics of the shepherd of to-day. Follow the story of this Bethlehem shepherd if you want some interesting reading.

Still farther back, six centuries, and we find another framer of history, who won a youthful reputation as an honest, truthful, and careful shepherd of his father's sheep. Sold into slavery by his own brothers he later became the foremost man in the Egyptian empire and saved his people in the time of famine. The shepherd of the Priest of Midian led his people out of bondage and became the great lawgiver upon whose writings the law of every civilized nation of this and past ages has been founded. If it is a pretty love story you wish, read of Rachel as she came with her father's sheep. If it is an example of steadfast character you seek, read the story of Job, the shepherd of 13,000 sheep. So on back through all the cycles of human history, until in the book of Genesis, 4,000 years before the

birth of Christ, we approach the family of our first parents, and we are told of his sons that, while Cain was a tiller of the soil, Abel was a keeper of sheep.

I have mentioned but a few of the prominent characters of the past who have been associated with our favorite industry. To dwell upon all as found in sacred history alone would be to fill a volume, but what I have mentioned simply shows our industry to be the most ancient and time-honored of all; and, if you have not yet become a keeper of sheep, you are at the least calculation 6,000 years behind the times.

ORIGIN

The ridge lands lying south of London are called the South Downs and the sheep on them are named for the hills upon which they feed. Reared upon soil that furnished but scanty herbage, they were small in size but compact in form, and were noted for the excellency of their flesh. Their home was in Sussex. As the chalk lands extend westward into Hampshire the soil becomes deeper and more fertile, affording better pasturage and heavier cultivated crops. As a result of this the sheep on these lands were larger, coarser, and stronger than the Southdowns.

Through centuries of neighborhood existence the sheep along the border lines of these territories very naturally merged together. We therefore find in the earliest accounts of the sheep of the Hampshire district that those in the eastern and northern sections of the district were more compact and symmetrical in form, with finer wool than those in the western portions. Gradually it became apparent that each of the types mentioned had its peculiar value: the smaller had more symmetry, with superior fattening qualities; while the larger were more prolific, were better mothers, and had much greater hardiness of constitution. Again, while these larger animals had much of the symmetry and fattening qualities of the smaller ones, they far surpassed them in early maturity and freedom from disease. There were thus clearly indicated the lines upon which the improvement must be made.

The improvement was carried on by the farmers themselves and was extended over the entire Hampshire district. The admixtures resulting from centuries of co-existence, followed by the careful and

painstaking selections of the many breeders who foresaw the advantages to be gained thereby, still farther unified the blood. The course taken was therefore more the mingling of different strains of kindred blood than the crossing of different breeds. The Hampshire sheep, then, are clearly descended from an original hardy race peculiar to the country from whence they came. The strength of constitution and size have been retained and enlarged upon and are characteristic of the animal.

James Rawlence, for many years the Honorable Secretary of the English Hampshire Down Flock book, wrote, in 1858, "About the beginning of the present century the sheep breeders of Hampshire began to bestir themselves and enterprising farmers procured rams from Sussex of the Southdown breed, care being taken to select the largest, coarsest, and most vigorous and blackest-faced individuals possible."

In Wilkinson's *The Farming of Hampshire* I find the following: "The Hampshire Down sheep are the glory of the country as respects live stock."

John Wilson, Professor of Agriculture in the University of Edinburgh, wrote in 1855, "The rapidly increasing breed of Hampshire sheep appears to be the result of a cross or intermingling of the bloods of the pure Southdown and the Horned sheep of Hampshire and Wiltshire, by which the hard-working qualities of the former are combined with the superior size and constitution of the latter, to the improvement of both." This matter is of importance because the remarkable prepotency of the Hampshires, which is everywhere recognized, can be accounted for only upon the fact of the distinctly local origin of the breed.

By a wise system of breeding and by skillful management, the Hampshire Down has been brought to his present state of perfection. He now illustrates what breeders of skill and intelligence can accomplish in preserving vigor of constitution and hardihood, and in adding to them the desirable qualities of early maturity, disposition to lay on flesh with the fat and lean properly intermingled, and symmetry of form with a most valuable and useful fleece of wool.

GENERAL BUILD

His head is rather large, with a somewhat Roman face, neck long and usually well set on, shoulders sloping, brisket deep with abun-

dant room for the vital organs, back straight with a good spring of rib going around the barrel, loin broad, quarters long, hams round and heavy, legs bony and strong, and feet large and open with a tough sole and crust. The face and legs are the blackest of any of the Down breeds.

WOOL

The wool is of medium length and strong fiber. It is used largely for making cheviots, tweeds, and business cloths, and commands the top prices everywhere. Flocks of breeding ewes average seven

FIG. 33.—YEARLING HAMPSHIRE EWE

to ten pounds per fleece. Mature rams will weigh or exceed 300 pounds and mature ewes, 200 pounds. The writer has owned a flock of forty ewes that weighed nearly 10,000 pounds.

ABILITY TO BREED

Ewes breed to a great age and then fatten well. Based upon their constitutional vigor the claim seems well founded that a Hampshire ram will serve more ewes than a ram of any other breed, except possibly the mountain breed, which are not in evidence in this country. The ewes are very prolific, and are excellent mothers and great

milkers, having udders like small cows. Mr. Morton, late editor of the *Agricultural Gazette*, once wrote under caption of "The Coming Sheep": "There is no race in England or in the world that can vie with the Hampshire in quick production of large-sized lambs."

Let any unprejudiced person attend the ram sales in Salisbury, England, in July each year, and if he has never before seen Hampshire lambs he will be astonished indeed. He will there be shown lambs that will offer him a pound weight per quarter since the day they were born — four pounds per day for all the days of their life. This rapid growth is owing simply to their great constitutional

FIG. 34.—YEARLING HAMPSHIRE RAM

vigor, thus enabling them to eat, digest, and assimilate a large amount of food. No such gains can be had without the most liberal feeding possible to secure. The Hampshire is the greatest butcher's lamb that has ever existed.

The quality that gives the Hampshire Down perhaps his greatest practical value to the sheep raiser at large is his marked prepotency; namely, the power to transmit with unerring certainty his own characteristics upon his offspring. In this he excels all others. The surpassing excellency of the Hampshire cross is well illustrated by the fact that at the great English shows the prizes for cross-bred sheep almost invariably go to those with the largest

admixture of Hampshire blood. Indeed, this has become so universal that breeders of other sheep are even now clamoring for classes in which Hampshire blood shall be excluded. The value of the Hampshire cross is forcibly illustrated in the Oxford Downs, a breed that was produced by crossing Hampshire and Cotswold blood. Blood for crossing is much needed in this country. The time is even now here when the exclusively wool sheep can no longer be raised with a profit to the farmer. Flocks can only be improved in mutton qualities by crossing with pure-bred mutton rams, and for this purpose the Hampshire has no equal. Each of the Down breeds has its peculiar excellencies, all of which are valuable. However, for a combination of hardiness of constitution; freedom from disease; ability to withstand grief, whether from exposure or shortness of feed; general useful qualities; excellence of flesh; value of fleece; strength and vigor of lambs; quick development and fitness for market; motherly qualities of ewes; docility and prepotency when crossed on other breeds or common stock, it may well be doubted whether an equal to the Hampshire can anywhere be found today on the face of the earth. We think not. They have been brought to the United States in considerable numbers and found most admirably adapted to our needs.

The American Hampshire Association was organized in 1889 and for a few years made seemingly but slow progress. In later years, however, it has gone on to the forefront by leaps and bounds until in the year 1913, the last year in which we have the full statistics, the demand had grown so great that more Hampshires were imported into the United States than all of other breeds combined; not only more but more than three times as many as all others combined. What further comment is needed as to their popularity or value?

Probably no other breed of sheep on the face of the earth has made such rapid strides toward popularity during the last five years as the Hampshire, and all the time "there's a reason."

Some of these reasons are aptly expressed in the two extracts given below:

THE IMPROVED HAMPSHIRE

The Hampshire of 1916 is decidedly a different sheep from the Hampshire of 1906. Then we were content and pleased to acquire the tall, rather thin-wooled, plain-faced, light-capped ewe, because she was a Hampshire and

possessed the Hampshire characteristics of strength, hardiness, motherhood, and the milk ability to push her lambs to a good growth in the shortest time; now we expect the Hampshire ewe to be closer to the ground, broader in the loin, stronger in the back, with a thick, compact wool coat and cap, and retaining the strong bone and milking ability of her antecedents.

Hampshires of this improved type make the ideal mutton and wool breed. They can be forced to large size or left to forage for themselves, and they show hardihood and ability to care for themselves and their lambs in a most satisfactory way.

In the writer's ten years experience in the development of the Snowcroft Hampshires there has been no instance where a ewe has refused to own her lamb, and they can be readily induced to adopt the offspring of another in case of need. In fact, the Hampshire of today seems to be just right and I can recommend him as the "all the year round, country wide, best choice" to be made.

S. F. SNOW.

THE HAMPSHIRE TODAY

The sturdy Hampshire is steadily and surely making his way to recognition and adoption in America, for good reason. He is large, strongly built, heavily quartered, with face, head, neck, and chest denoting remarkable constitution and hardihood; and, with his massive form, fine-fibered fleece, marked prepotency, great fecundity, early maturity, delicately flavored and deeply colored flesh, together with his docility and close flocking habit, should easily grow into general favor. The Hampshire may have an equal but no superior for early lamb raising, the lambs often averaging a pound of growth per day for the first 60 or 90 days. The Hampshire ewe is prolific and a great milker and mother, rarely or never disowning her lamb.

For crossing on the Merino for mutton purposes the Hampshire has no superior and no equal for crossing on the long-wool breeds, as his English history attests. His power of assimilation is only equaled by his rapid growth, great size and weight, strong character, domesticity, and superior mutton qualities. He is a splendid feeder, is rarely out of condition, flocks like a Merino, takes on flesh and fat with wonderful facility, is an all-around great sheep for the farm and block, and has a bright future in America.

THE AMERICAN SHEEP BREEDER.

SOME CHARACTERISTICS OF THE BREED

1. *Early maturity*.—As a producer of "baby" and lamb mutton the Hampshire stands today without a peer upon either continent.

2. *Constitutional vigor*.—The Hampshire has the ability to stand more grief, whether from exposure or shortness of feed, than any other known breed.

3. *Docility and motherly qualities*.—The ewes are wonderful milkers and possessed of strong motherly instinct, a case of a Hampshire ewe having disowned her offspring being almost or quite unknown.

4. *Adaptability*.—Being possessed of great constitutional vigor and blessed with good appetites, they will adapt themselves to, and thrive upon, the coarsest herbage or the roughest provender without seeming inconvenience.

FIG. 35.—YEARLING HAMPSHIRE RAMS IN PASTURE

5. *Fecundity or prolificness*.—Twins are the rule; triplets not uncommon; quadruplets are on record. A flock of Hampshire ewes will frequently produce a lamb crop of 150 per cent or 175 per cent; 200 per cent has more than a single witness; and 225 per cent is on record in a flock of twelve ewes.

6. *Prepotency*.—The power to stamp upon his offspring his own magnificent characteristics is unparalleled.

In conclusion—As a money maker and all-around farmer's sheep, we challenge the world to produce his equal.

STANDARD OF EXCELLENCE

Head and Legs

Head.—Moderately large, but not coarse; well covered with wool on forehead and cheeks.

Nostrils.—Wide.

Color (head and legs).—Dark brown or black.

Eyes.—Prominent and lustrous.

Ears.—Moderately long and thin, and dark brown or black color.

Legs.—Well under outside of body, straight, with good size of bone, black.

Neck, Shoulders, and Chest

Neck.—A regular taper from shoulders to head, without any hollow in front of shoulders, set high upon body.

Shoulders.—Sloping, full, and not higher than the line of back and neck.

Chest.—Deep and full in the heart place, with breast prominent and full.

Body

Back.—Straight, with full spring of rib.

Loin.—Wide and straight, without depression in front of hips.

Quarters.—Long from hips to rumps, without sloping, and deep in thigh. Broad in hips and rump, with full hams. Inside of thighs full.

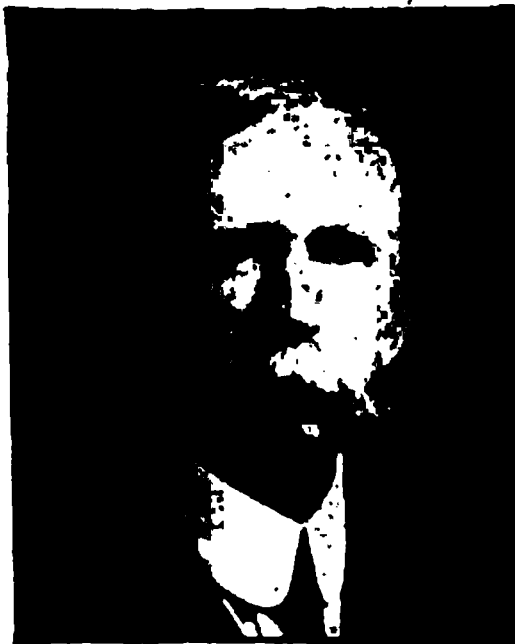
Scale of Points

<i>Head</i> .—Size and shape, 5; ears and eyes, 3; color, 5; legs and feet, 2..	15
<i>Neck, Shoulders, and Breast</i> .—Neck, 5; shoulders, 10; chest and breast,	
15	30
<i>Body</i> .—Back and loin, 15; rib, 5.....	20
<i>Quarters</i> .—Length, 10; width, 10; twist, 5.....	25
<i>Wool</i> .—Forehead and cheeks, 2; belly well covered, 3; quality, 5.....	10
Total	100

THE OXFORD DOWN

W. A. SHAFER

Secretary, American Oxford Down Record Association, Hamilton, O.



The origin of the Oxford Down breed was the deliberate crossing of two distinct types of sheep.

English sheep lore tells us that somewhere around 1830 or 1831 the idea occurred almost simultaneously to two or three distinguished sheep breeders to "attempt to unite the diverse qualities of the long wool and the short wool."

The actual home of the breed may be said to lie in the locality around Witney, Oxfordshire, England, a town whose world-wide fame for blankets renders it only natural that it should have an equal reputation for wool.

Looking back over the early history and descriptions of the different breeds of sheep in and around Oxfordshire, we can easily understand why those breeders sought to unite the desirable, and, to eliminate the undesirable, qualities of the breeds they found there.

Spooner, writing in 1844 says: "The Cotswold is a large breed of sheep with a long and abundant fleece, and the ewes are very prolific and good nurses."

Other writers describe the breed as having at that time "a large, loose frame and too much tallow."

Spooner says: "The Hampshire Down sheep are larger than the South Down, with stouter and coarser bone and longer on the legs. The quantity and quality of the fleece is pretty similar or rather shorter."

Other writers said the Hampshire was noted for the superior quality of its flesh and a quick feeding habit.

Gloucestershire, through which extends the Cotswold Hills, joins Oxfordshire on the west. Hampshire is the next county to Oxford but one, Berkshire lying to the south.

Formerly the Cotswold sheep were bred only on the hills and fattened in the valleys of the Severn and the Thames, and the Hampshires were bred in great numbers on the Chalk Hills or Downs of that county and many of them were also sent to the valley to be fattened. These early practices brought the sheep from the Cotswold Hills and from the Hampshire Downs into Oxfordshire.

FIG. 36.— A TYPICAL OXFORD DOWN

Some South Down sheep were also brought into Oxfordshire and history says some of this blood was used in forming the new breed; but the principal source was the Cotswold and Hampshire breeds. When we mention the English breeds of eighty to one hundred years ago we must remember that they lacked the type and uniformity possessed by them today, and that perhaps the importance of quality was not emphasized so much. Since then the weaknesses of the different breeds have to a great extent been bred out, but the principal characteristics are much the same.

In 1853 it was claimed that "the great difference in favour of the Oxford Downs arose from the superior quality and therefore the higher price per pound of the mutton as compared with the

long-wooled sheep, and the superior weight of wool and of mutton as compared with the short-wooled sheep.”

In 1854 a report on “Farming in Oxfordshire,” published in the Journal of the Royal Agricultural Society, refers to the Oxford Downs as “the glory of the county.”

DISTRIBUTION

The distribution of Oxford Downs in North America now extends from the Atlantic to the Pacific coast in the United States and Canada, and typical specimens at all state and provincial fairs prove the assertion that in this breed is combined the size and weight of fleece of the long wool and the quality of the Down to a greater extent than is found in any other breed of sheep.

Careful experiments in the West have demonstrated that the Oxford holds his fleece better among the sage brush and does not become bare-bellied on the range to so great an extent as other dark-faced breeds, and the demand there for rams to be used in grading up the native flocks is greater than the supply.

SCALE OF POINTS

Breed Type for Animals

	Points
Form. —Of a good general appearance, made by a well-balanced conformation, free from coarseness in any part, and showing good style both at rest and in motion.....	15
Head. —Of moderate length and width between the ears and between the eyes, and well covered with wool over poll and down to the eyes. Color of face an even dark grey or brown, either with or without grey spot on tip of nose.....	6
Weight. —When fully matured and in good condition rams should weigh 250 to 350 pounds; ewes, 180 to 275 pounds.....	5
Ears. —Medium size, not too thick and of an even brown or dark grey color	2
Legs. —Short, strong in bone, flat and of even dark grey or brown color, placed squarely under the body and well apart.....	2

Constitution

Large around the heart and wide and full in the chest.....	10	•
The movement must be bold and vigorous.....	5	
Eyes bold, prominent and bright.....	4	
Skin bright pink in color.....	3	
Neck strong and muscular in rams and well set on in both sexes.....	3	

Mutton Form and Quality

Wide and straight on top of shoulders, back, loin and rump, from base of neck to tail.....	15
Full shoulders and thighs, well meated both inside and outside.....	5
Flanks well filled and strong so as to make the lower lines of the body as straight as possible, and side lines straight or rather full.....	4
The whole carcass evenly covered with good, well-marbled meat.....	6

Wool

Fleece of moderate length, close and of even quality, covering the whole carcass, well and free from black patches upon the body, neck or head	15
Total	100

THE SUFFOLK DOWN *

CHARLES S. PLUMB, Columbus, Ohio

Professor of Animal Husbandry, College of Agriculture of the Ohio State University

The native home of Suffolk sheep was in southeastern England, in the counties of Suffolk, Norfolk, Essex, and Kent, on the chalk hills and undulating clayey lands.

The original stock of the Suffolk Down sheep was the old Norfolk and Suffolk heath sheep. Youatt says that they had a long, slender carcass, long legs, horns, and a black face. The forequarters were deficient, the shoulders low, and the withers sharp. The hind quarters were fairly well developed. The fleece was short and fine and weighed light. The breed was hardy and prolific. These sheep were crossed with Southdown and Hampshire rams, although English Suffolk Down breeders assume the breed to have been maintained fairly pure since 1810. The Southdown blood bred off the horns, improved the form, and gave a better carcass and earlier-maturing, easier-fattened sheep than the Norfolk, while the Hampshire blood gave size and weight. Mr. George Dobito of Judgate, Suffolk, was one of the most important improvers of the Suffolk Down in the last century. The breed was first exhibited under this name in 1859 at the show of the Suffolk Agricultural Association and was not recognized by the Royal Agricultural Society until 1886.

INTRODUCTION TO AMERICA

The introduction of the Suffolk Down sheep to America is very recent. In 1888 Mr. M. B. Streeter of Brooklyn, New York, made an importation of prize-winning stock, and the same year Mr. B. D. Sewell of Frederickton, New Brunswick, imported twenty ewes. In 1892 the Iowa Suffolk Sheep Society imported two rams and twenty yearling ewes and placed them on the farm of G. W. Franklin, the secretary of the society, at Atlantic, Iowa.

* Extracts from article on the Suffolk Down in *Types and Breeds of Farm Animals*, by Professor Charles S. Plumb, Ohio State University.

These three importations were from the flock of Joseph Smith of Hasketon, Suffolk, England, and contained numerous valuable prize winners.

CHARACTERISTICS

The head is hornless and is a distinct black color, more so than any other British breed, and inclines to be long. The ears are also black and tend to be large. The neck is moderately long; the body inclines to be rangy but with well-sprung rib; the chest is broad and full; and the legs black in color. The fleece is moderately short and fine and covers the body and neck to head, not as a rule

FIG. 37.—CHAMPION SUFFOLK RAM, NEW YORK STATE FAIR, 1910

passing over the forehead. The legs are woolled to knees and hocks. The breed rather resembles the Hampshire Down but for the bareness of head. The Suffolk is said to be very hardy and is quite exempt from foot rot.

SIZE

The size of the Suffolk Down is nearly equal to the Hampshire, and is greater than the Shropshire. It is stated that mature rams of Mr. Sewell weighed from 200 to 240 pounds, while one of the

imported yearling ewes of Mr. Streeter weighed 200 pounds and a ram lamb nine months old 195 pounds. The average Suffolk possesses a weight popular with American stockmen.

MUTTON

The Suffolk Down as a mutton sheep has rank, evidently possessing good qualities secured from Southdown blood, the fat and lean being well placed and in good proportion, and the grain and flavor superior.

FEEDING EXPERIMENTS

The Suffolk Down as a feeder also ranks well. It has been kept under conditions of moderate grain ration with considerable grazing, showing fair feeding returns. In experiments on fattening wether lambs at the Iowa Experiment Station the Suffolks gained rather faster per day than the Shropshire or Southdown in each trial, averaging .55 pound and .40 pound daily gain in two trials. They dressed out in carcass 53.6 and 52.54 per cent, and the carcasses were valued at \$4.25 and \$5.00 per hundred, a materially poorer showing, however, than most of the other breeds made.

WOOL

The Suffolk Down as a wool producer is open to objection. Mr. Streeter, in a letter to Ezra Carman in 1892 says, "I think these sheep have just one fault,—they are not heavy shearers and they are somewhat leggy and bare of wool underneath." Mr. Sewell reports clipping nine pounds per fleece on the average, which is a very fair showing.

BREEDING QUALITIES

The fecundity of Suffolk Down ewes is advocated as a valuable point in behalf of the breed. Twins are common and triplets not uncommon. In the spring of 1891, 32 ewes of Mr. Sewell raised 58 lambs, while the same year 5 imported ewes of Mr. Streeter produced 11 lambs, and the same ewes 14 in 1892. According to returns made to the Suffolk Flock Book Society of England, the number of lambs reared to June 1, 1903, was 140.66 per cent per 100 ewes, as compared with 136.16 in 1902 and an average of 132.97 per cent for the previous sixteen years. It is almost unnecessary to say that the ewes make good nurses.

DISTRIBUTION

The distribution of Suffolk Down sheep is mainly in southeastern England, although in 1903 exports from England were made to several other countries. In the United States Suffolks have almost no record, barring a few isolated flocks. They are especially suited to low or slightly rolling lands of good grazing character. In the United States breeders of Suffolk Downs are almost unknown. In the great sheep shows of the country the breed is practically unrepresented. Even professional showmen do not exhibit Suffolks, and no classes are provided for them. From the show-ring point of view they are quite attractive and would add materially to the interest attached to our sheep exhibitions, notably at state fairs and the International Live Stock Exposition.

SCALE OF POINTS

	POINTS
<i>Head</i> —Hornless: Face black (glossy black) and long, and muzzle moderately fine—especially in ewes. (A small quantity of clean white wool on the forehead not objected to.) Ears, a medium length, black and fine texture. Eyes, bright and full.....	25
<i>Neck</i> —Moderate length and well set. (In rams stronger, with a good crest).....	5
<i>Shoulder</i> —Broad and oblique.....	5
<i>Chest</i> —Deep and wide.....	5
<i>Back and Loin</i> —Long, level, and well covered with meat and muscle; tail broad and well set up; the ribs long and well sprung, with a full flank	20
<i>Legs and Feet</i> —Straight and black (glossy black), with fine and flat bone. Wooled to knees and hocks, clean below. Fore legs set well apart. Hind legs well filled with mutton.....	20
<i>Belly (also Scrotum of Rams)</i> —Well covered with wool.....	5
<i>Fleece</i> —Moderately short; close fine fibre without tendency to mat or felt together, and well defined, i. e., not shading off into dark wool or hair	10
<i>Skin</i> —Fine, soft, and pink color.....	5
Total	100

THE CHEVIOT

F. E. DAWLEY

Secretary, American Cheviot Sheep Society, Fayetteville, N. Y.



Of the two breeds of sheep that Scotland has given to the world, the Cheviot is best known and most profitable. From the earliest live stock records, we find that the long sheep of the lower ranges had been bred pure for ages, and had always been noted for its beauty, vigor, prolificacy, health, and milking qualities. The meat is of fine texture, with little surplus fat; and, like that other compact, highly specialized product of the canny

Scotsman's skill as a breeder—the Polled Angus—the percentage of waste and cheap parts in the carcass has been reduced to a minimum.

These qualities are all transmitted in a very great degree to the cross-breds, and all improvement in the milking and lamb-raising qualities is shown in the grade ewes. This makes the Cheviot rams in great demand for breeding purposes, and comparatively few pure-breds ever find their way to market.

EARLY IMPORTATIONS

The first importations to America were made in 1828. The progress of the breed in this country has been due solely to demonstrated merit, as the sheep have been kept in small flocks by working farmers and no wealthy boomer has ever developed. Until twenty years ago, but few Cheviots were kept outside of New York and Ontario, Canada, where they have shown that they are well adapted to hill lands. Being great rustlers, active and hardy, they have proven very profitable.

CHARACTERISTICS

The Cheviot is the most beautiful sheep, and very striking in its appearance. Its style, activity, and brightness are apparent to the most casual observer. It is medium in size. Rams will weigh up to 180 pounds and ewes from 130 to 150 pounds. The head is hornless and covered with a short, stiff, white hair. The legs below the knee have the same covering as the face. The ears are pointed, carried erect, and free from wool. The eyes are bright and sparkling. The head is small and rather broad, the jaws strong, the nostrils large,

FIG. 38.—THE FAMOUS CHEVIOT RAM BYRNES SON, 7904

and the nose slightly Roman. This is more pronounced in the rams. The neck is short, broad, and deep, and is carried upright. They have a pronounced crest, which is characteristic of the breed. The body is round but deep and the legs short, the general appearance being of a blocky, low-set type. No breed of sheep carries such a compact, smooth body. The ribs extend well back and downward. The barrel is long, with a good loin. The hams are large and thick, and the mutton ranks high because of its superior quality and high dressing percentage, and large proportion of the finer cuts. The feet are strong, and the hoofs hard and firm, a case of foot-rot in a Cheviot being unknown.

VALUABLE IN CROSSING

In Scotland and the north of England the Cheviot is in great demand for producing cross-breeds, where it stands first, adding early maturity and quality to the carcass when bred to the larger breeds.

Mr. Archibal MacNeilage, in a recent address on sheep breeding in Scotland, said of the Cheviot, "When regard is had to its intrinsic merit as the most valuable wool producer among the northern breeds, its premium in the mutton market, and its place in producing the half-blood sheep, the Cheviot cannot be denied a premier place for general utility." It is the most beautiful sheep in the

FIG. 39.—CHEVIOT LAMBS

world, and what it lacks in grandeur and picturesqueness when compared with the Blackface, is made up for by its great symmetry and beauty.

The Cheviot, although not under that distinctive breed name, has the longest history of any British breed. It can be identified as early as 1470 as the "long" sheep of the Cheviot hills. Curiously enough, it was this characteristic of its length, coupled with the unique quality and wealth of its wool, which attracted the attention of Sir John Sinclair and his colleagues and led to the transportation of the breed to the north of Scotland. There, in Sutherland,

and in Caithness, the original type of the breed has been more faithfully preserved than in its native habitat among the Cheviot hills.

SALES AND PRIZES

The lambs are born strong and, with the mother's heavy milk flow, rapid growth is made, the lambs filling out quickly and showing a finished appearance from the start. They are marketable at an early age; and, being plump, sleek, and trim, they command the highest market.

At the Beattock sales, Brydon sold the tup (ram) Craigphadrig for £194 5s. to Mr. John Miller, and in the same year he sold 174 tups at an average of £8 11s. 5d. The highest price recorded for a gimmer (ewe lamb) was £125, made last year at Hawick.

The preeminence achieved by the Cheviot as a mutton breed in the carcass competitions at the Smithfield Club shows is striking. Its eminence has been the feature of these competitions from the beginning, but in December last its preeminence was completely established. In the class for one long-wooled wether lamb under twelve months old, all the seven prizes went to Cheviots; in the corresponding class for one long-wooled wether hog (a wether lamb before first shearing) over twelve and under twenty-four months old, all the seven prizes except the second, which went to a Welsh carcass, were won by the Cheviot; the champion mutton carcass was a Cheviot; while the reserve champion mutton carcass was a Cheviot-Suffolk lamb. The champion carcass weighed 136 pounds, and the reserve champion mutton carcass weighed 135 pounds. The advantage of crossing in order to secure weight is here clearly seen, the reserve champion lamb carcass weighing only one pound less than the supreme champion hog carcass.

ADAPTED TO NEW YORK CONDITIONS

The Cheviot is truly a dual-purpose sheep; for, while in lamb and mutton production it cannot be beaten, it produces a fleece of the highest priced wool raised in the States. Most of the fleeces will grade as $\frac{3}{8}$, and the fleece is heavy, compact, and even. Much improvement in the fleece has been made during the past twenty years.

FIG. 40.—GROUP OF CHEVIOT EWES

No breed of sheep is better adapted for the hill lands of New York and the East, and yet they do equally well on the cut-over lands of the North, on the bleak shores of Nova Scotia and Prince Edward Island, on the ranges of the West, and on the broad acres of the corn belt. In the southern states there is a heavy demand for Cheviots for crossing on the native sheep, and they seem to be equally popular there. Truly, the Cheviot is demonstrating that it is a cosmopolitan and can adapt itself to almost any condition.

STANDARD FOR JUDGING CHEVIOT SHEEP

General Conformation and Quality

	Points
Quality. —Deep and full breast and large through chest. Back, wide and straight with well sprung, deep ribs; legs well placed and leg of mutton full and thick. Body well fleshed; skin pink with no blue or dark coloring; fleece compact and medium fine; bone strong and fine; general appearance graceful, symmetrical, active.	20
Size. —In good flesh when fully matured a twenty-months' old ram should weigh not less than 180 pounds, and a ewe not less than 110 pounds	10
Head. —Should be free from horns or scurs. It should be of medium length and broad, with ample breadth between the eyes. Ears should be of medium length and usually erect when at repose. Head covered with clean white hair, extending from nostrils to back of poll. Bridge of nose from between eyes to nostrils straight or slightly arched in female and more strongly arched or Roman in rams. Color of tip of nose black.	15
Body. —Well proportioned, having notable depth and length, thick on top and on flanks. Loins should be very broad and thick, shoulder should be set well back and be smoothly covered, and crops be full and well arched. The rump should be long, broad, and level. . . .	20
Legs. —Should be short, well set apart and be covered with clear white hair, with no wool below hocks and knees. The hind legs should be flat and deep below hocks. Pasterns should be strong and not show weakness, supporting the body well.	10
Feet. —Symmetrical, squarely placed when in repose and hoofs black in color	5
Fleece. —Should cover the body completely to behind the poll and ears and down to knees and hocks. Under part of the body should be well covered. In mature animals should be not less than three inches long for annual growth and be compact and of medium wool class. The ideal weight of fleece for rams is 12 pounds and for ewes 8 pounds when in mature form.	20

Objections

Stubby horns on the head; hair about the thighs or kemp on the body; reddish or sandy hair on head or legs; lack of wool on under part of body.

Disqualifications

All male lambs shall be ineligible to registration, if having scurs or horns exceeding one inch in length at six months of age.

THE DORSET

ARTHUR DANKS, Allamuchy, N. J.

Manager, Tranquillity Farms

Dorset sheep originated from one of the most southerly countries of England, where they have been bred pure for over a century; in fact, they are one of the oldest English mutton breeds. In their native country, they are noted for their exceptional milking qualities. This feature, coupled with the fact that a carefully selected and well-cared-for flock will often produce as high as 200 per cent increase, accounts for their popularity.

If the ewes are liberally provided with milk-making food while lambs are young, they will make a finished lamb in a surprisingly short period of time.

BREEDING SEASON ALMOST UNLIMITED

One of the most valuable characteristics of the Dorsets, is their ability to drop lambs at almost any season of the year. It will of course pay the owner of a Dorset flock to take advantage of this feature and aim to have his lambs dropped in the autumn months, when the weather is mild and when the pastures are usually good and can be easily and cheaply supplemented by such crops as rape, or roots that may be sown in corn at the last cultivation. Lambs dropped at this season of the year will make almost unbelievable gains at small cost, requiring little or no expensive grain before going to market. At this time of year we have no flies to bother them, no parasites to infect them. They require little or no attention, as during pregnancy the ewes have had abundant of exercise and Nature's best food, which is grass. If the lambs are cross-breds, and one desires to market them, he has the advantage of the highest markets of the year, which have never yet been oversupplied.

MUCH IMPROVEMENT DURING THE PAST TWENTY-FIVE YEARS

When the breed was first introduced into this country, in the eighties, some unscrupulous importers and breeders advertised them as "dog-proof"—"two crops of lambs" per year. The result, of course, was many disappointments and consequent reactions to the breed; but for the past twenty years they have gained steadily in numbers and popularity, giving a good account of themselves in practically every state in the Union. The breed as a whole has improved a great deal within the past decade or two. Where we used to find whole flocks shearing as low as five pounds of wool, we now have many flocks shearing better than eight pounds; in fact, I

FIG. 41.—DORSET RAM LAMBS, SIX MONTHS OLD AND SHORN

believe the breed will average a little over eight pounds. We have noted many other improvements in their conformation, in addition to their shearing qualities. They are now of more blocky conformation and straighter top lines, indicating an animal of better constitution.

VALUABLE FOR CROSSING

For crossing they are most satisfactory. We have a great many high-grade flocks in the country that will command practically double the price of other grade sheep, due to their ability to drop

lambs fully as early as the pure-bred animals. A flock of this kind, if built up on a Merino foundation, will of course shear even more than the pure-breds and make an almost ideal farmers' breed of sheep — inheriting as they do their early lambing characteristics, and quick maturing, resulting from their ability to produce a large flow of milk.

HARDINESS AND ADAPTABILITY

Are the Dorsets hardy? To this question, we would answer, "Yes!" They are as hardy as any of the short-wooled, improved English mutton breeds, in which we have a highly developed animal,

FIG. 42.—DORSET EWE

similar in many respects to a Holstein cow, which is often referred to as the poor man's breed of cattle, simply because they have the ability to consume large quantities of coarse, unmarketable fodder, converting it into more profitable food products. Therefore, in considering a breed of mutton sheep, look upon them as an animal that will economically consume pasturage and other roughage, converting it into valuable mutton and wool. We are confident that, side by side with any other breed, the Dorsets will hold their own and give an excellent account of themselves.

As a breed they are most pleasing to look upon, both sexes having horns — the females a light horn that serves as a protection against

dogs, requiring an expert "sheep-killing" dog to get away with a Dorset ewe with lambs at her side. Their wool is of excellent quality, free from surplus grease and oils, and is always in demand by wool buyers, who will usually pay from one to two cents per pound more than for some of the other breeds.

SCALE OF POINTS

Adopted by the Continental Dorset Club

Points

Head. —Neat, face white, nostrils large, well covered on crown and under jaws with wool.....	5
Horns. —Small and gracefully curving forward rather close to jaw.....	5
Eyes. —Prominent and bright.....	2
Ears. —Medium size, covered with short-white hair.....	2
Neck. —Short, symmetrical, strongly set on shoulders, gradually tapering to junction of head.....	5
Shoulders. —Broad and full, joining neck forward and chine backward with no depression at either point (important).....	15
Brisket. —Wide and full, forward, chest full and deep.....	8
Fore Flank. —Quite full, showing little depression behind shoulder.....	8
Back and Loin. —Wide and straight, from which ribs should spring with a fine, circular arch.....	10
Quarters. —Wide and full, with mutton extending down to hocks.....	10
Belly. —Straight on under line.....	3
Fleece. —Medium grade, of even quality presenting a smooth surface and extending over belly and well down on legs.....	12
General Conformation. —Of the mutton type, body moderately long; short, stout legs, placed squarely under body, skin pink, appearance attractive	15
Total	100

THE COTSWOLD

F. W. HARDING

Secretary-Treasurer, American Cotswold Registry Association, Waukesha, Wis.

The Cotswold breed of sheep had its origin in Gloucestershire, England. A large portion of this shire is rolling, some of it being quite hilly, and one often hears of the Cotswold Hills. For the most part, the soil is heavy clay.

This popular variety of long-wooled sheep has proven the best adapted to the environments. Cotswolds have been a distinct type for nearly one hundred years.

They are as old as any of the English breeds, and enter into the make-up of some of the English breeds of more recent origin. Record associations were established for the breed, both in the United States and in Great Britain, as far back as pedigrees have been kept of any breed of today.

The character and appearance of the breed have undergone changes to meet the latter-day demands. From a white-faced sheep, without wool on either head or legs, and to an extent resembling the Leicester sheep, has evolved a well-covered, more compactly built and lower set sheep. This meets the present-day flock masters' demand for a breed with a good carcass, a heavy fleece, and breed that is hardy and early-maturing.

Although the Cotswold of today has probably not given way in size or weight to the old-time type, it more nearly meets the best standard of mutton type. It is characteristic of the Cotswold breed to flesh heavily on the back and loin, a most profitable quality for a sheep to possess. It has been a satisfaction to Cotswold breeders and exhibitors to be represented at expositions and shows with a breed that is not equalled by any other in the particular of well-covered backs when properly fitted.

The Cotswold is the largest breed of sheep, with the possible exception of the Lincoln. Rams mature to weigh 350 pounds and ewes 250 pounds. Lambs make some remarkable weights at weaning time, the ewes of this breed being very good mothers and heavy milkers.

Good flocks average 14 pounds of wool — fleeces weighing 22 pounds for rams and 17 pounds for ewes not being exceptional clips.

FIG. 43.— CHAMPION COTSWOLD, NEW YORK STATE FAIR

A few years ago the Iowa Experiment Station conducted a feeding test as between a number of the best known breeds in this country, with the result that the Cotswold yielded the largest net returns at twelve months of age. At that time the sheep of the different lots were shorn of their fleeces, which were sold and the carcasses were marketed.

The Cotswold breed is especially popular in the range states for crossing on sheep carrying more or less Merino blood, and thousands

of pure-bred rams find market each year for ranch use. The lamb thus produced is a good rustler and makes a good weight at five or six months and is also very popular as a feeding proposition for marketing at ten to twelve months. The ewe lambs are often kept in the herd, where in the case of crosses of other English breeds on the western native types it is the custom to market the entire crop. It is generally conceded there is a smaller tail-end in a band of grade Cotswolds than in any other breed.

For a farmer's flock the Cotswold has no superior. They are hardy and prolific, and, being of attractive appearance, they make an ideal sheep for diversified stock farming. There is no overproduction of breeding stock in the country and therefore the opportunity for making sales is greater than in the case of some breeds where we have frequently seen low prices prevail on account of overproduction.

Registered Cotswold flocks, although popular in nearly all parts of North America where they have been tried, are, however, to be found in the largest numbers west of the Rockies and in the central states, while they are also possibly the most popular farmers' breed in Ontario.

They have acquired their present position in Canada for the reason that they yield the greatest net returns. Many parts of the United States where the Cotswold is not known to any extent are adapted to the profitable maintenance of Cotswold flocks, and need only to be tried in order to establish the breed in these sections of the country the same as in Canada.

The American Cotswold Registry Association is national in character and ranks second in point of number of sheep recorded, among sheep registry associations of the United States. It applies the greater part of its surplus each year to encouraging a further production of Cotswold sheep in North America, and it offers liberal cash prizes at fairs and live stock shows.

If you are not already a breeder of Cotswolds, the foregoing statement of facts relative to the merits of the breed and the opportunities presented for a profitable business is worthy of your careful consideration in making a choice of breeds.

EXTRACTS FROM STEWART'S "DOMESTIC SHEEP"

The Cotswold sheep has an interesting history. It is the oldest breed of sheep of which there is any satisfactory record. Its history goes back for at

least three centuries; and beyond that, while it has no written records, yet it has been known that the long wool yielded by this sheep was in high favor long before the name of the sheep which produced it was a matter of notoriety. * * *.

It is one of the hardiest of all breeds, having been reared for this long period in a poor, exposed district; and, while it changes character when removed to more favorable surroundings, yet it is one of the hardiest sheep for the range. * * * * * It has been crossed with advantage with the Leicester, yielding then better mutton and a finer staple of lustrous wool, in good demand for heavy goods, and especially of the coarser kinds of women's dress fabrics. One of the best of its crosses is with the smaller Down breeds. It has been used with much success to cross on the Merino, the lambs of this cross making fine market stock, being large and fat, and the full-grown cross-breeds making fine market mutton and a useful fleece. Sir J. B. Lawes in his experiments in feeding sheep of various breeds, proved that these sheep made a more profitable return in growth for the food consumed than any other breed. Its hardiness has been proved by its average losses by death or accident being as low as 2½ per cent, under ordinary circumstances, under a system of open fielding during the winter.

The face of this sheep is mostly white, sometimes with a grayish mottled marking; the cross with the Downs gives a black face with a less pronounced Roman nose, which is, however, less prominent than in the Lincoln and Leicester. The forehead has a conspicuous tuft of wool. The belly is generally well covered with wool, as is also the scrotum. For crossing on the smaller breeds, especially our common natives, it is not excelled in point of the hardiness of the progeny, the increased size, and the weight and value of the fleece.

STANDARD OF EXCELLENCE AND SCALE OF POINTS

For Cotswold Ram

Head. —Not too fine, moderately small and broad between the eyes and nostrils, but without a short, thick appearance, and young animals well covered on the crown with long, lustrous wool.....	8
Face. —Either white or slightly mixed with gray, or white dappled with brown	4
Nostrils. —Wide and expanded; nose, dark.....	1
Eyes. —Prominent, but mild looking.....	2
Ears. —Broad, long, moderately thin and covered with short hair.....	4
Collar. —Full from breast and shoulders, tapering gradually all the way to where the neck and head join. The neck should be short, thick, and strong, indicating constitutional vigor, and free from coarse and loose skin.....	6
Shoulders. —Broad and full, and at the same time join so gradually to the collar forward and chine backward as not to leave the least hollow in either place	8
Fore Legs. —The mutton on the arm or fore thigh should come quite to the knee. Leg upright, with heavy bone, being clear from superfluous skin, with wool to fetlock, and may be mixed with gray..	4

<i>Breast.</i> —Broad and well forward, keeping the legs wide apart; girth or chest full and deep.....	10
<i>Fore flank.</i> —Quite full, not showing hollow behind the shoulders.....	5
<i>Back and Loin.</i> —Broad, flat, and straight, from which the ribs must spring with a fine circular arch.....	12
<i>Belly.</i> —Straight on underline.....	3
<i>Quarters.</i> —Long and full, with mutton quite down to the hock.....	8
<i>Hock.</i> —Should stand neither in nor out.....	2
<i>Twist, or junction inside the thighs.</i> —Deep, wide, and full, which with a broad breast, will keep the legs open and upright.....	5
<i>Fleece.</i> —The whole body should be covered with long, lustrous wool....	18
<hr/>	
Total	100

For Cotswold Ewe

<i>Head.</i> —Moderately fine, broad between the eyes and nostrils, but without a short, thick appearance, and well covered on crown with long, lustrous wool	8
<i>Face.</i> —Either white or slightly mixed with gray, or white dappled with brown	4
<i>Nostrils.</i> —Wide and expanded; nose dark.....	1
<i>Eyes.</i> —Prominent, but mild looking.....	2
<i>Ears.</i> —Broad, long, moderately thin, and covered with short hair.....	4
<i>Collar.</i> —Full from breast and shoulders, tapering gradually all the way to where the neck and head join; the neck should be fine and graceful, and free from coarse and loose skin.....	5
<i>Shoulders.</i> —Broad and full, and at the same time join so gradually to the collar forward and chine backward as not to leave the least hollow in either place.....	8
<i>Fore legs.</i> —The mutton on the arm or fore thigh should come quite to the knee; leg upright, with heavy bone, being clear from superfluous skin, with wool to fetlock, and may be mixed with gray...	4
<i>Breast.</i> —Broad and well forward, keeping the legs wide apart; girth or chest, full and deep.....	10
<i>Fore flank.</i> —Quite full, not showing hollow behind the shoulder.....	4
<i>Back and loin.</i> —Broad, flat, and straight, from which the ribs must spring with a fine circular arch.....	12
<i>Belly</i> —Straight on underline.....	5
<i>Quarters</i> —Long and full, with mutton quite down to the hock.....	8
<i>Hock.</i> —Should stand neither in nor out.	
<i>Twist, or junction inside the thighs.</i> —Deep, wide, and full, which, with a broad breast, will keep the legs open and upright.....	5
<i>Fleece.</i> —The whole body should be covered with long, lustrous wool....	18
<hr/>	
Total	100

THE LINCOLN

BERT SMITH

Secretary-Treasurer, National Lincoln Sheep Breeders' Association,
Charlotte, Mich.



The Lincoln Sheep is the largest of all mutton breeds and has been bred pure for the last 150 years. The rams weigh from 250 to 300 pounds, and the ewes from 225 to 275 pounds. They produce a fleece of wool from 8 to 14 inches long, weighing from 12 to 16 pounds, and grading as braid and low quarter blood.

The Lincoln is adapted to fairly fertile and arable farming sections. They also require a fairly humid climate for their greatest development.

For use on fine wool or range ewes to produce mutton lambs, the Lincoln rams have been among the best. The lambs produced by this cross are exceptionally profitable, and are very popular in the market.

SCALE OF POINTS

For Lincoln Ram

	POINTS
1. Good symmetry, shoulders well back with head up, must stand straight and level on hocks and fetlocks.....	10
2. <i>Size</i> .—A Lincoln is essentially a big sheep, but this is not to mean length of leg only.....	10
3. <i>Length and Girth</i> .—Length of body consistent with a deep rib, wide spring	10
4. <i>Head and Ears</i> .—A good masculine head with deep wrinkles on forehead; a clear, bold eye; wide nostrils, blue skinned, not pink. Ears long and well placed, not pointing too forward or “lopping”; white ears objectionable; color should be a blue grey, mingled with darker spots	10
5. <i>Bone and Substance</i> .—A Lincoln ram needs a strong bone to carry his weight	10
6. <i>Activity</i> .—The ram must walk free and gaily.....	10
7. <i>Mutton</i> .—Deep, firm handling flesh along back, a wide loin, no hardness of touch on top of shoulder, a good wide “scrag.” Leg of mutton well let down.....	20

	POINTS
8. <i>Fleece</i> .—Of great importance. Great weight of wool without coarseness; a broad, clean staple of fine lusters, that is, a wavy appearance in the lock; soft or what is termed "mossy" wool objectionable; no harsh, straight, hairy wool on thighs; head to be well covered and a broad forelock; breast and inside the thighs to be covered	20
Total	100

FIG. 44.—A TYPICAL LINCOLN

THE LEICESTER

A. J. TEMPLE

Secretary, American Leicester Breeders' Association, Cameron, Illinois

ORIGIN

A study of the production of distinctive types or breeds of sheep of the mutton class comprises essentially a study of the origin of the Leicester. Most breeds, other than the expressly fine-wooled, owe their development at some stage to them. The Leicester early took form as a distinct and separate type, not spontaneously but by operation of selective mating by a master breeder; in fact, he may be called the "master breeder," since he was the first to make an earnest effort to improve and unify the existing types of sheep — the products of environment alone — and attain successful results. This was accomplished about the middle of the eighteenth century by Robert Bakewell, of Dishley, in the county of Leicester, England, whence the name was acquired, as so frequently occurs, from the place of origin.

Previous to the inception of Bakewell's breeding operations, sheep, like Topsy, had mostly "just growed." Different sections of the world contained different types, it is true, but these arose largely as the result of the influence of environment or the natural effects of different conditions of soil, feed, and climate, rather than any systematic attempt on the part of shepherds to create a uniform type of the greatest utility.* The vogue was for size and a high degree of fecundity — how much, not how good! Perfection of mutton and wool characteristics were secondary considerations. It was to remedy these conditions that Bakewell commenced his work, and the Leicester sheep today stand as an indisputable monument to show how well he succeeded.

DEVELOPMENT

Bakewell's agency in this work was selection. He did not adopt out-crossing. He felt that the common sheep of the district had the

necessary inherent qualities if they were but developed. He desired an animal that would flesh easily, especially on those parts where the cuts were most valuable. Previously, sheep were long-bodied without compactness, and inclined to an exceeding slackness behind the shoulders and lack of comparative width at loin. Bakewell set out to overcome these defects and at the same time maintain a desirable quality and quantity of wool, together with a high degree of prolificacy and milking ability in dams. He established in mind an ideal and strove earnestly to produce a sheep which, if it could not surpass, would at least approach it closely in important respects. Inbreeding he employed with successful results — so successfully, in fact, that the qualities of his animals were impressed upon their offspring over those of the other parent, wherever outcrossing was practiced. Besides prepotency, inbreeding attained a consistency and uniformity of type which soon became virtually invariable. These features comprehend characteristics of the breed as it obtains today and make it equally desirable now for use in crossing to produce generally an effective improvement and enhance especially the utility for mutton purposes of a breeding flock.

When Bakewell first directed his efforts in 1755 toward the production of a better type of sheep, he could seldom command \$5 per season rental for the services of his rams, and this was practically the maximum price anywhere at that time. In 1789, it is recorded, he let seven rams for service only, at \$2,000 each, which is sufficient proof of their desirability and the demand for them. An association, known as the Dishley Society, was organized to promote the breeding of the Bakewell sheep, which acted as the forerunner for the present Leicester associations in Great Britain and America.

Reports of the excellency of the Dishley sheep soon spread outside the narrow confines of Leicestershire, and few districts where sheep raising was pursued failed to receive infusions of the Bakewell blood. In the northern counties this was especially true. Two brothers named Culley, in Northumberland shire — the pioneer shepherds of their district — were striving to build up a better class of sheep. They found the Dishley rams so valuable for crossing upon the native Teeswater ewes that they pursued this system most extensively. It was subsequently followed by other breeders with the result that a type known as the Border Leicester and closely akin

in essential respects to the Dishley, or, as it is now called, the English Leicester, was established. The Border Leicester later spread through Scotland and now is one of the principal breeds raised there. In fact, probably the largest pure-bred Leicester flock in the world was that owned by Lord Polwarth of Mertoun House, St. Boswells, Scotland, and recently dispersed.

DISTRIBUTION

From Great Britain both the English and Border classes have been widely exported to all of the principal sheep-raising countries and have served in many instances as the basis for producing the distinctive type of the country. In New Zealand and Australia they have been popular for crossing purposes. The Leicester early entered both the United States and Canada, and recently many importations have been made by South Americans and South Africans. On the European continent, especially in France, they have been highly regarded for years and employed for mating with fine-wooled breeds.

ESTABLISHMENT IN AMERICA

Importations of the Dishley type of Leicester were made toward the latter part of the eighteenth century, mostly into the southeastern Atlantic states and lower Canada. Although these comprised few in number and concerning them no reliable breeding records can be traced, the evidence of their use shows plainly in the character of the native sheep in those sections of the country today. Early imports on record comprehend their introduction into Quebec in 1800 by Reverend Toofy; into Massachusetts in 1806 by Mr. John Hart, of Cheshire; and into New Jersey in 1806 by Mr. George Farmer, of New Brunswick, the latter flock attained exceeding prominence, rams, it is stated, being sold for as high as \$1,000 per head. The popularity of the Leicester became so great that frequent importations were subsequently made into the United States and Canada of both the Border and English classes. The blood of these, not greatly different, became commingled and a type of Leicester established which is distinctly American. In the selective breeding process which ensued, the merits of both types were naturally sustained and correlated to form a breed readily adaptable to the conditions of the country.

Some notable importations have been made within recent years by the following breeders: John Kelly, Shakespeare, Ont.; A. and W. Whitelaw, Guelph, Ont.; James Snell, Clinton, Ont.; James Douglas, Caledonia, Ont.; T. E. Gardner & Son, Monmouth, Ill.

CHARACTERISTICS

Symmetry of appearance is a noteworthy characteristic of the American Leicester. The body is long, yet broad, and the breadth carried evenly, with a wide spring of rib, from shoulder to rump.

FIG. 45.—BORDER LEICESTER YEARLING EWE. BRED IN SCOTLAND AND WON FIRST PRIZE AT HIGHLAND SHOW

The legs are upstanding and the bone is invariably fine and lacks undue roughness and size, which not infrequently in the carcasses of some animals makes the measure of bone to meat an unprofitable investment to the consumer. Rapid and economical fleshing qualities, with a uniform distribution over the body, represent another attribute to the breed. In a feeding test at the Ontario Agricultural College, yearling wethers weighing 242 pounds made a gain per day of .54 of a pound. Mature rams will range in weight from 225 to 300 pounds and ewes from 185 to 235 pounds, but a weight in rams of over 300 pounds is quite common.

The wool is exceedingly long, six inches or more, and the sheep will shear in the neighborhood of eleven pounds. The fleece is included in the luster class and is especially valuable for combing purposes. It is wavy, bright, and remarkably free from kemp, or hair-like fibers, which depreciate the usefulness of wool in manufacture. The fleece has a very low shrinkage, representing an average loss from scouring of about 25 per cent only. The wool covers the entire body except the poll, face, and legs, and lies over it in long, spiral locks or strands. Complete absence of black or grey fibers is the general rule.

Face and legs are covered with very fine, white hair, which extends over the head to just behind the ears, where the wool growth commences. The face is of medium length and the shape of the nose is distinctly aquiline. The ears are medium in size, delicate, and erect. Neither sex possesses horns of any description. The hair on the legs extends well above the knees and hocks almost to the belly before the wool meets it. In fine, it may be called a study in white.

Any description of the American Leicester would follow closely that of the Border type, which it resembles in detail more than the English. In fact, in general utility characteristics there is little obvious distinction between the two original classes. The difference rests most apparently with the appearance of the head and legs. The English Leicester has a slight tuft of wool on the head and also carries some wool on the legs. The skin under the hair of the face has, moreover, a slight bluish tint, lacking in the Border, which is plainly visible. The Border variety is rather more active, somewhat hardier, and more firmly fleshed.

PRODUCTIVENESS AND USEFULNESS

Evidence of the usefulness of the Leicester and its merits lies in records of the production of the Southdown, Shropshire, Hampshire, Lincoln, and Cotswold breeds, in the early development of which Leicester blood played an effective part. Since then this father of the mutton breeds has been used to advantage for crossing purposes wherever an improvement in size and mutton character is required. They are especially recommended by many breeders for mating with the Merino, in order to obtain greater weight, superior fattening

qualities, and a wool of longer staple and lighter shrinkage. In this respect they have been held in high esteem in France, where many generations of crosses on the Merino have ultimately evolved a very creditable type, known as the Dishley Merino.

The class of wool produced by the Leicester makes it valuable for crossing on fine-wooled sheep where greater length and lighter shrinkage are required. Much of the famous cross-bred wool types from Australia are the result of Leicester and Merino matings. Leicester wool itself can be utilized in both woolen and worsted manufacture, and, although forming a top of the lower counts, yet, on account of its luster, may enter into high-grade fabrics. It was one of the few wools which could be shipped profitably from Canada to the United States during the regime of the eleven-cents-per-pound custom duty. When twelve inches or more in length, it is frequently employed in the manufacture of wigs, switches, and other products for imitating human hair.

Proof of hardiness and strength of constitution of the Leicester may be gained by a knowledge of the climate in those countries where they are raised most prominently — Scotland and Canada. In the coldest weather the animals will thrive, and yet again they will adapt themselves to much warmer conditions. The Canadian Leicesters are now renowned all over the world, and in many localities in Canada where they are produced they must exist under extremely opposite temperatures — intense heat in summer and intense cold in winter. Nevertheless, they are popular in Canada, which is a certain indication of their ability to withstand and thrive in this environment.

A widespread distribution throughout so many different parts of the world acts not only as an assurance of their innate hardiness, but also of their easy adaptability to most conditions where other classes of sheep are capable of thriving.

Economy of production is shown with Leicesters in any authoritative feeding trials that have been pursued. For instance, in an investigation conducted by Professor Curtiss at the Iowa Agricultural Experiment Station with many breeds, the Leicester dressed the highest percentage of carcass to live weight and returned the greatest financial receipts. Their gains in weight were made cheaply and rapidly, so that a most profitable showing in general resulted.

STANDARD OF EXCELLENCE

(Note—This standard is more particularly for Leicesters of the Border type, as the English Leicester differs somewhat in having a bluish white face, and is sometimes referred to as blue-faced, while the forehead usually carries a tuft of wool, and it is also wooled on the shanks.)

Head.—Carried rather boldly, erect, and stately; moderately fine, tapering nicely to the nostrils; rather long and free from any growth of wool; covered with short, white hair.

Face.—Clear white; rather long and somewhat convex, giving a slight Roman effect, more noticeable in the rams.

Nostrils.—Wide and expanded; nose dark.

Eyes.—Bright and clear, but mild.

Ears.—Thin, moderately long; carried erect and alert; covered with short hair, but may show dark spots in the skin, which will be covered with dark hairs.

Collar.—Full from breast and shoulders, tapering gradually to junction of head and neck.

Shoulders.—Broad and full; smooth and even, without depression either towards neck or back.

Forelegs.—Straight and clean; covered with white hair; bone fine, but of good quality.

Breast.—Broad and well-developed, making good width between the fore legs. Girth and chest full and deep.

Fore Flank.—Quite full, leaving no depression behind the shoulder.

Back and Loin.—Very broad; ribs well arched, giving the back a wide, flat appearance.

Belly.—Even and covered with wool.

Quarters.—Long and full, carrying the mutton well down to the hocks.

Hock.—Straight and clean.

Twist.—Low, wide, and full.

Skin.—Pink and clear; free from spots on the body.

Fleece.—The whole body excepting the head and legs should be covered with a glossy wool of good fiber, hanging in dense spirals that carry their crimp or wave all the way in to the skin. The fleece should consist of a mass of distinct curls, all over the body, without the parting along the spine as in some other long-wooled breeds.

THE TUNIS

J. NEWTON MACPHERSON, Scottsville, N. Y.

The Tunis is one of the oldest distinct breeds of sheep now in existence. We are told that their origin dates back 3,000 years.

The Tunis sheep, as the name indicates, were natives of the province of Tunis in northern Africa. Ten head were purchased from the Bey of Tunis by General William Eaton in 1799, when he was United States Consul at Tunis.

These sheep were placed on board the man-of-war "Sophia," bound for the United States. Only one ram and one ewe survived the long voyage. This pair was placed under the care of Judge Richard Peters of Belmont, near Philadelphia, Pennsylvania, who kept and bred them until he had a fine flock of pure-bred Tunis sheep. The imported pair, Caramilli and Solina, were both killed by dogs, the ewe raising her last lamb at the age of sixteen years.

During the twenty years or more in which Judge Peters bred the Tunis sheep, several flocks were sent to North and South Carolina, Virginia, and Georgia, where they were successfully bred in large numbers until the beginning of the Civil War, in 1861, during the continuance of which they were nearly all destroyed.

In 1894 Mr. James A. Guilliams of Roachdale, Indiana (President of the Tunis Breeders' Association from 1896 to 1912) purchased eight head of these sheep and brought them to Putnam County, Indiana.

In September, 1895, Mr. Guilliams exhibited a small flock of his sheep at the Crawfordsville fair in that state. Among this exhibit were several ewes with two crops of lambs by their side for the season of 1895. The January lambs weighed 100 pounds

each, and the August lambs from the same mothers 25 to 30 pounds each.

To Mr. Guilliams is due much credit for bringing this most valuable breed of sheep from obscurity and introducing them into the live Middle West, where their merits were very quickly appreciated by a number of progressive breeders. From there the fame of the Tunis has gone far and wide. Many flocks have been established in nearly every state, from Maine on the east to California on the west, and also in Canada and New Zealand. Many inquiries are being received from Mexico, Hawaiian Islands, Isle of Pines, and South Africa.

FIG. 46.—TUNIS RAM, GUILLIAMS' PRIDE, No. 2503

They are particularly adapted to the southern climate, but do well in the cold north. They are hardy and long lived, and are prolific breeders. The rams are very active, and are exceptionally strong cross-breeders, producing an excellent cross, with the large mutton breeds especially. Their shearing qualities have in the past been their weak point; but this defect has largely been overcome by careful breeding, and now we have many Tunis sheep that shear 10 and 12 pounds of the very best quality of wool, commanding the very highest market price.

Mr. R. H. Williams, animal husbandman of the University of Arizona, writes me that they are trying to evolve a perfect sheep for their section by crossing four breeds and then fixing the type. The work has been going on over seven years with good results.

About \$20,000 have been spent in this work, with results that are proving a distinct triumph for the Tunis sheep.

The Tunis particularly excel as producers of early lambs that become very fat at 10 to 14 weeks old, and bring the very highest prices on the large city markets for choice, fancy meat.

The Tunis will breed during almost any month of the year, and sometimes two crops of lambs may be secured in one year. However, I would not advise the following of this practice.

FIG. 47.—GROUP OF TUNIS EWES, 11 TO 13 MONTHS OLD

SCALE OF POINTS

	POINTS
<i>Blood</i> .—Imported from Tunis or a perfect line of ancestors extending back to the flock owned and bred by Judge Richard Peters, of Pennsylvania	20
<i>Constitution</i> .—Healthful countenance, lively look, head erect, deep chest, ribs well arched, round body with good length; strong, straight back, muscles fine and firm.....	15
<i>Fleece</i> . Medium length, medium quality, medium quantity; color white, sometimes tinged with grey; evenness throughout	10
<i>Covering</i> .—Body and neck well covered with wool, legs bare, or slightly covered; face free of wool and covered with fine hair.....	10
<i>Form</i> .—Body straight, broad and well proportioned; small bone; breast wide and prominent in front; tail should be docked short.....	12

	POINTS
<i>Head.</i> — Small and hornless, or nearly so, tapering to end of nose; face and nose clean, in color, brown and white; ears broad, pendulous, and covered with fine hair, in color, brown to white.....	10
<i>Neck.</i> — Medium in length, well placed on shoulders, small and tapering..	5
<i>Legs.</i> — Short; color brown and white, woolled below the knee not objectionable	6
<i>Size.</i> — In fair condition when fully matured rams should weigh 150 pounds and upward; ewes, 120 pounds and upward.....	6
<i>General appearance.</i> — Good carriage; head well up; quick, elastic movements, showing symmetry of form and uniformity of character throughout	6
Total	100

THE BLACK FACED HIGHLAND

F. E. DAWLEY, Fayetteville, N. Y.

The sheep of most striking appearance, and one of the most profitable when kept on high ground, is the Black Faced Highland. With a full fleece, at full maturity, one of these imperial old rams is fully as picturesque as our western Rocky Mountain sheep; and the showing of reserve strength, vitality, and hardiness is inspiring.

Bred in the highlands of Scotland for generations, the Black Faced Highlands, like the Scotch Highland cattle, are the product of their environment. Men of a most frugal and economical type — utilitarians to the core — have made selections and developed breeds of animals suited to their conditions and localities as few others have.

The Ayrshire cow cannot be excelled for the sections where she was produced; the Angus is the ideal type of a beef animal for the locality where it was perfected; the Cheviot sheep is the most compact breed, and fits the hill lands as no other does; and the Highland cattle and sheep not only fit into the landscape, but into the conditions of the country, as the ball fits into the socket.

IMPORTANCE OF ADAPTABILITY TO CONDITIONS

Where will one find greater prepotency, and such uniformity as is found in these breeds? These types of animals, produced by natural conditions, and whipped into shape by men who were masters of the art of breeding, are recognized at a glance.

The damp, misty climate in the mountains in the north of Scotland, and the long, cold winters, call for a sheep of wonderful vitality, with a fleece that is impervious to snow, sleet, and rain; and the Black Faced Highland meets these requirements. The long, outside guard fibers of the fleece shed water like a thatch, and the soft under-wool, fine and oily, prevents the moisture from penetrating the skin and keeps the animal warm.

Long years of environment with conditions practically the same from year to year does wonders in fixing an ideal type, through the

survival of the fittest. In Great Britain, where the cost of production is greater than with us, the question of adaptability of breeds to local conditions has been studied more carefully than it has here. This has resulted in a sort of community breeding, which has given to live stock husbandry most of its breeds of domestic animals. Perhaps in no animal is this more marked than in the sheep, and we find the breeds of Britain largely localized on the types of soil best suited to their conditions, even the names of the breeds indicating the section where each was developed.

FIG. 48.—BLACK FACED HIGHLAND

If breeders and farmers in America would observe the laws of nature in selecting their breeds, and forget that old fallacy that "the breed to keep is the one you like best," selecting instead that type best fitted to each locality, we should not see so many misfits and failures. One of the serious difficulties in successful live stock work in New York is the diversity of breeds.

Mark the wonderful development in the Holstein industry in the fertile valleys of central New York — nearly every farm a com-

ponent part of the greatest Holstein center in the world, and all successful! Why? Just because the breed fits the locality, and the product fills the demand of the market economically. Almost unconsciously, therefore, we have developed the greatest exposition of community breeding in America.

WELL SUITED TO HIGH LANDS

Select the breed that fits your conditions in sheep, and success is assured. On the higher lands of the state, in the Hudson River section, the Adirondacks and Catskills, and the hills of the southern tier of counties, there are many acres where the Black Faced Highland sheep should do well; and probably will do better than the heavier, tighter-wooled sheep. It is said that a Scotch mist will wet an American through in fifteen minutes, but the texture of coat of a Black Faced Highland sheep is such that the mists collect on it and drip off the ends of the long, coarse wool, wetting the outside and leaving the inner coat as dry as down. This ability to shed water is shown even in the young lambs and is a strong evidence in favor of the theory of development of type through evolution and environment. The ability of this breed to thrive on scanty herbage and to travel long distances each day in search of food is another marked characteristic.

The Black Faced Highland has never gotten much of a foothold in the United States, partly because we have not practiced sensible live stock husbandry on the cut-over hilltops and partly because we have not studied adaptability of breeds; but more because in the earlier days the American people were not mutton eaters and the hardy little American Merino was a more profitable sheep for the hill farmer, for it gave far more wool, which brought a better price. With the changes in cloth styles, and the demand for carpet wool, Black Faced Highland fleeces are bringing more in market, and the quality of the meat is attracting more attention to the breed. But few flocks have been brought to America and unfortunately most of these have been placed on low lands, where the attempt to overcome centuries of environment in one generation has courted disaster, and the sheep have not done so well as have the heavier breeds in the vicinity. It is unfortunate that Black Faced Highlands have not been more thoroughly tried out on some of our New York and

New England hillsides, particularly on the higher cut-over hillsides and mountains. They are mountain sheep and need different care than those developed on the low lands. While there are limits to their possibilities, in many sections they should prove profitable.

I would not advise anyone to go into Highlands on the low ground, nor to invest heavily in them in a large way until they have been more thoroughly tested here, but they have a place in our American sheep husbandry when we find it.

CHARACTERISTICS

As a utilitarian breed, the value of the Black Faced Highland sheep lies in its hardiness, vitality, and ability to "rough it," and in the gamey, high quality of its flesh from an epicurean viewpoint. Hence, evidences of vigor and strength are to be looked for in its make-up.

One of the leading characteristics is a fleece of the pronounced long, coarse-wool type, suitable for heavy goods and carpets. It is seldom free from kemp and is the coarsest wool produced by any of the British breeds.

Both sexes have horns. The rams' horns usually form graceful spirals, making as many as three turns in aged animals. The ewes' horns are smaller and lighter, and curved. The face is covered with short hair, which is either black, mottled, or dark brown in color, preferred in the order named. The horns and hoofs are dark-colored. The nose and muzzle are strong and prominent, and the nostrils wide and open, black in color. The ears are short and small.

The body should show the mutton type, though it is below medium in size — the dressed carcass of a mature sheep running about 50 to 70 pounds in weight.

In judging, one must not lose sight of the fact that this is a small sheep, highly specialized to meet given conditions, and that any material change in size, density of fleece, and vigor would probably defeat the ends for which the breed has been developed.

THE KARAKUL

WILLIAM M. RIDER

Professor of Animal Husbandry, Syracuse University, Syracuse, N. Y.

Karakul sheep are fur-bearing sheep. Their native home is in central Asia in the province of Bokhara, a country lying between Turkestan and Afghanistan, about 600 miles east of the Caspian Sea. The name Karakul as applied to the sheep is taken from Kara Kul (Black Lake), a village in Bokhara.

This country is more or less barren with very little rainfall, the summers being very hot and dry. Vegetation is extremely scant. The winters are very severe, with temperature often far below zero and the ground heavily covered with snow. With these extremes in climate, together with other natural causes, we find developed a very hardy type of sheep. In fact, they have much in their favor to gain for themselves the title of the hardiest domestic sheep known.

ORIGIN AND DESCRIPTION

The origin of this type of sheep is somewhat obscure. Two great classes of sheep have inhabited central and western Asia for centuries. They belong to the fat-rump and the broad-tail types. The Karakul breeds belong to the broad-tail type and are said to have sprung from a cross between the black long-tailed Danadar sheep (now nearly extinct), and the fat-rump sheep. There are three main types of the Karakul sheep — Arabi, Shiraz, and Duzbai. The Arabi sheep are small fur-bearing sheep, supposedly from Arabia. They are not very numerous. The Shiraz or white Persian fur sheep are gray in color and produce the valuable Krimmer fur. It is the Karakul of the Duzbai type that gives the finest and closest curl to the fur.

Karakuls of the Duzbai type are large sheep. Generally, the rams are horned and the ewes are hornless. The head is long and narrow, and the nose very arching, being a pronounced Roman nose. The ears are of medium size and pendant. The withers are high and quite prominent. The body is somewhat long and fairly deep, the loin is broad, the rump very sloping. The tail is broad, flat, and extremely fat, often weighing from ten to twenty pounds in mature males. The bone is strong, clean, and not too large. The mutton is of excellent quality, and gamey in flavor.

FIG. 49.—IMPORTED RAM, "ALEC," FUR TYPE

The Karakul is a very hardy type of sheep. Because of its natural environment it is well adapted to sections of extreme temperature and limited rainfall. It is of great value for crossing with range sheep and with our medium-wooled breeds. The resulting lambs are exceptionally large and strong at birth; they are very thrifty and develop rapidly, easily weighing close to 100 pounds when in ripe condition for the market. Lambs can easily be made

to gain one pound a day for the first sixty days. Both the pure-breds and the grades are well suited for the hillside land pasture of the eastern states, as they are good grazers, being able to make large growth on rough, scant pasture.

The ewes are quite prolific. They breed regularly, and in some cases twice a year, although this is not desirable from the standpoint of best results in maintaining vigor and size of the breeds.

FIG. 50.— WHITE, LONG-WOOL EWES, WITH LAMBS Sired BY A KARAKUL RAM

Of these half-blood lambs 99 per cent. will be black and 90 per cent. will have fur skins

IMPORTATIONS

The importations of Karakul sheep to the United States were first made in 1908 by Dr. C. C. Young, a native Russian and a naturalized citizen. In this importation there were five rams and ten ewes. These were secured, after overcoming many difficulties, at a cost of over \$25,000. A second lot of these sheep were brought to America by Dr. Young in the spring of 1913. This importation consisted of eleven rams and six ewes. A third, and probably

FIG. 51.—PURE-BRED KARAKUL EWES AND LAMBS

the last importation of Karakuls which will ever come to America, was made in 1914, consisting of fifteen rams and six ewes. In 1914, The Agnew Syndicate & Royal Investment Co., of Charlottetown, Prince Edward Island, brought out a flock of Karakuls and Duzbais, which were purchased in the vicinity of Old Bokhara. These left Lebau, a Russian seaport, some ten days before the city was bombarded by the Germans. For some reason the cargo of sheep was transferred to another vessel in the North Sea, and after many hair-breadth escapes, the vessel, manned by a German crew, was obliged to put into the port of St. John, Newfoundland.

The importers were unable to land this flock in Canada and it was kept in Newfoundland for two years. It numbered some 130 head of the best Persian lamb fur flocks of Bokhara and western Turkestan.

We now note that the total number of Karakuls imported by Dr. Young to the United States are fifty-three head. Of this number thirty-one were rams and twenty-two ewes. Altogether, some 180 head have been brought to America.

KARAKULS IN NEW YORK

In 1910 Mr. F. E. Dawley became interested in breeding Karakuls, and in 1911 he exhibited six head at the New York State Fair. His success with the breed on the blue grass pastures of central New York led him to bring together as many Karakuls as possible, and there are now at Fayetteville more than 85 per cent of all that trace to imported stock.

As there are seven distinct blood lines, there is no fear of inbreeding.

The color at birth is, in nearly every case, jet black—a color much preferred. Occasionally a lamb is born that has a white spot on the head or tail, or both. At birth and up to three to five days, the lambs have a coat of very close, lustrous fur. It is this fur, known as Persian lamb fur, which is so valuable and in such demand. To be of greatest value, the fur should show a tight-curling lustrous condition and be jet black in color. The beauty of the pattern formed by the irregular arrangement of the curls, and the fineness and softness of the coat also adds much to its value. The desired condition of the skin of the lamb soon disappears as it grows older.

FIG. 52.—FUR MADE FROM SKIN OF A HALF-BLOOD LAMB —
FROM A KARAKUL SIRE AND A LINCOLN DAM

FIG. 53.—KRIMMER FUR, FROM A LAMB FROM AN IMPORTED
SHIRAZ RAM AND A REGISTERED CHEVIOT EWE

FIG. 54.—FUR FROM A SKIN OF A QUARTER-BLOOD LAMB—
SIRE, A HALF-BLOOD KARAKUL; DAM, A REGISTERED COTSWOLD

Even when a day or two old, the curls begin to loosen and the fleece grows in length; as the lamb nears six months the color gradually changes to gray.

FUR SHEEP INDUSTRY

The development of the fur sheep industry in America is in its infancy and perhaps because of this fact, coupled with the great demand for "Persian fur" skins, the future of this new branch of sheep husbandry is very bright. There is much to be learned regarding the breeding and management of this type of sheep. Considerable knowledge has been gained about them since their first importation. Two important points stand out as quite definitely established: first, that the pure-bred Karakul sheep can be kept successfully and economically under New York conditions as far as climate, soil, feeding, and housing are concerned; second, that pure-bred Karakul rams crossed on ewes of certain of our native sheep produce lambs of which a very large percentage possess skins that grade high as "Persian lamb fur."

The demand for half-blood Karakul ewes is far beyond the supply, and more than one hundred head were sold last year at \$250 per head.

The production of half-bloods for fur and breeding is a growing and profitable industry. That this last point is of much concern to all owners of native sheep, whether pure-bred or grade, will be manifest when we note that according to the United States Government reports the imports of the raw skins for "Persian lamb fur" amounted to the enormous sum of \$14,000,000 in one year. Because of the uncertainty of the shipments from across the water, there is a great opportunity for this industry, not only in New York and other eastern states, but in the great sheep-raising states of the West.

Because of the limited number of pure-bred Karakul rams and their high value, it will be advantageous to breed these rams to sheep of our domestic breeds. The breeds best adapted for this work are the long, coarse-wool breeds, especially the Black Faced Highland, Cotswold, Lincoln, and Leicester. Selected and tested Karakul rams should be used, as this will insure greater success. However, it is not safe to expect good results every time. The work done with the large flock of Karakuls at Fayetteville, N. Y., has demonstrated that this new industry is going to be permanent, and very successful.

INDEX TO ASSEMBLY DOCUMENTS, 1918

	Doc. No.
A	
Agricultural and Industrial School, Industry, annual report.....	60
Agriculture, Commissioner, annual report.....	23
report on licensing dogs and protection of domestic animals.....	13
Albany and Troy bridges, report of Highways Commissioner on.....	50
Albion, Western House of Refuge for Women, annual report.....	20
American Life Saving Society, annual report.....	52
American Scenic and Historic Preservation Society, annual report.....	62
American Society for Prevention of Cruelty to Animals, annual report..	36
Assembly, bills, supplemental index.....	66
committees, list	3
members	1
B	
Bath, New York State Soldiers' and Sailors' Home, annual report.....	15
Bedford, New York State Reformatory for Women, annual report.....	29
Bills, Assembly, supplemental index.....	66
Black River Canal, report of Superintendent of Public Works on.....	35
Blind, New York Institution for the Education of, annual report.....	18
Boards, commissions and departments, <i>see specific names of.</i>	
Bronx Parkway Commission, report.....	42
C	
Canals, Black River canal, report on.....	35
Erie canal between Tonawanda and Buffalo, report on.....	34
report of Comptroller relating to expenditures on.....	47
Central New York Institution for Deaf Mutes, Rome, annual report....	39
Charities, Fiscal Supervisor, annual report.....	51
Charities, State Board of, annual report.....	25
Children, New York State Society for the Prevention of Cruelty to, annual report	56
Civil Service Commission, annual report.....	46
Commissions and departments, <i>see specific names of.</i>	
Committees of the Assembly.....	3
Commutations granted by Governor, statement of.....	16
Comptroller, State, annual report.....	10
report on expenditures on the canals.....	47
special report on expenditures.....	11
special report on municipal accounts.....	48
Conrad Poppenhusen Association, annual report.....	19
Constitutional amendments, Federal, votes and dates in Congress and in New York State.....	37
Cooper Union, report of trustees.....	31
Cornell University, State Veterinary College, annual report.....	24
Crime, statistics of, annual report of Secretary of State.....	6
Crippled and deformed children, New York Hospital for, report.....	28
D	
Deaf mutes, institutions for the instruction of.....32, 39,	59
Departments, <i>see specific names of.</i>	
Dogs, licensing, report of Commissioner of Agriculture on.....	13
Domestic animals, protection, report of Commissioner of Agriculture on..	13

	Doc. No.
E	
Education Department, annual report.....	45
Erie canal, between Tonawanda and Buffalo, report on.....	34
Excise, Commissioner of, annual report.....	7
F	
Fiscal Supervisor of State Charities, annual report.....	51
G	
Governor, message	2
communication on prohibition.....	4
statement of pardons, commutations and reprieves granted by.....	16
H	
Health, State Department, annual report.....	43
Highways, Commissioner, annual report.....	54
report on acquisition of Albany and Troy bridges.....	50
Hospital Commission, annual report.....	8
I	
Industrial Commission, annual report.....	57
Industry, New York State Agricultural and Industrial School, annual report	60
Insurance, Superintendent of, annual report.....	41
Investigations, surface railroads, New York city.....	5
J	
Jewish Protectory and Aid Society, annual report.....	55
Juvenile Delinquents, Society for the Reformation of, annual report.....	33
L	
Land office, Commissioners, report on escheated lands.....	17
Library, State, annual report.....	40
M	
Members of the Assembly.....	1
Message from the Governor.....	2
Municipal accounts, special report of Comptroller on.....	48
Museum, State, annual report.....	44
N	
National Guard, report of Commission in re compensation of members..	14
New York City, Institution for the Improved Instruction of Deaf Mutes, annual report	59
New York city, surface railroads, investigation, report of commission....	5
New York Commercial Tercentenary Commission, report.....	49
New York Hospital for the Care of Crippled and Deformed Children, annual report	28
New York Institution for the Education of the Blind, annual report....	18
New York Institution for the Instruction of the Deaf and Dumb, annual report	32
New York Juvenile Asylum, annual report.....	21
New York State Agricultural and Industrial School, Industry, annual report	60
New York State Hospital for Incipient Pulmonary Tuberculosis, annual report	22
New York State Library, annual report.....	40

